



STEREO TAPE DECK

${\tt MODEL\,4000DB}$

SECTION 1	SERVICE MANUAL
SECTION 2	PARTS LIST
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SECTION 1

SERVICE MANUAL

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I. SPECICATIONS

An asterisk next to a	figure indicates the mi	inimum guaranteed performance.
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TRACK SYSTEM	4-track 2-channel stereo monaural system
REEL CAPACITY	Up to 7" reel
TAPE SPEED	7-1/2 and 3-3/4 ips.±2% (*±3%)
	Playback a 1,000 Hz 7-1/2 ips. pre-recorded test tape
WOW AND FLUTTER	Less than 0.15% (*0.22%) at 7-1/2 ips.
	Less than 0.2% (*0.3%) at 3-3/4 ips.
	Playback a 3,000 Hz pre-recorded test tape
TOTAL WOW AND FLUTTER	*Less than 0.28% at 7-1/2 ips.
	3,000 Hz recording and playback
FREQUENCY RESPONSE	30 to 23,000 Hz ±3 dB at 7-1/2 ips.
	30 to 16,000 Hz ±3 dB at 3-3/4 ips.
WIDE RANGE	*40 to 22,000 Hz ±3 dB at 7-1/2 ips.
(AKAI SRT TAPE)	*40 to 14,000 Hz ±3 dB at 3-3/4 ips.
LOW NOISE	*40 to 20,000 Hz ±3d B at 7-1/2 ips.
(SCOTCH #211 TAPE)	*40 to 14,000 Hz ±3 dB at 3-3/4 ips.
DISTORTION FACTOR	Less than 1.0% (1,000 Hz 0VU recording)
TOTAL DISTORTION FACTOR	*Less than 1.5% at 7-1/2 and 3-3/4 ips.
	1,000 Hz 0VU recording SCOTCH #211 tape
PLAYBACK OUTPUT LEVEL LINE OUTPUT	0.775V (0 dBm ± 1.0 dB) using a 250 Hz 7-1/2 ips. pre-recorded test tape
DIN OUTPUT	0.775 V (0 abin 11.0 ab) using a 250 Hz 7-1/2 ips. pre-recorded test tape
HEADPHONE OUTPUT	30 mV at 8Ω
NPUTS MIC INPUT	More than 0.4 mV
LINE INPUT	More than 70 mV
DIN INPUT	More than 7.5 mV/low and 75 mV/high
RECORDING/PLAYBACK LEVEL	More than 2.5 in vitow and 75 in vinigh
WIDE RANGE	0 ±0.5 dB 1,000 Hz 0VU recording
LOW NOISE	0 ± 1.0 dB 1,000 Hz 0VU recording
SIGNAL TO NOISE RATIO	Better than 55 dB (*50 dB)
TOTAL SIGNAL TO NOISE RATIO	*Better than 45 dB
TOTAL SIGNAL TO NOISE KATTO	Recording volume at 180 degree position from MIN.
CROSS TALK	Better than 65 dB (*60 dB) (monaural)
CROSS TALK	Better than 40 dB (stereo)
	1,000 Hz +3 VU recording
ERASE RATIO	
The state of the s	Better than 70 dB 1,000 Hz +3 VU recording
RECORDING BIAS FREQUENCY	105 kHz ±5%
BIAS LEAK	Less than -25 VU Dolby SW OFF, Monitor SW TAPE
HIGH FREQUENCY DEVIATION	Within 2 dB Playback a 8 000 Hz 2-3/4 inc. pre-recorded test tape at 7-1/2 inc.
RECORDING CAPACITY	Playback a 8,000 Hz 3-3/4 ips. pre-recorded test tape at 7-1/2 ips.
AST FORWARD AND REWIND TIME	90 min. stereo recording using a 1,800 ft. tape at 7-1/2 ips. Within 4 min, and 40 sec /3 min, 40 sec, using a 1,800 ft, tape at 50/60 Hz
MOTOR	Within 4 min. and 40 sec./3 min. 40 sec. using a 1,800 ft. tape at 50/60 Hz
TOTOK	4-Pole Induction 1-speed motor
	Type: SSM-1
IFADC EDIGEROLD	Revolutions: 1,500/1,800 r.p.m. at 50/60 Hz
HEADS ERASE HEAD	Type: E4-200
	Gap: 0.6 mm
	Impedance: 200Ω ±5% at 100 kHz
	D.C. Resistance: 2Ω
RECORDING HEAD	Type: P4-154
	Gap: 1 micron
	Impedance: 95Ω ±15% at 1 kHz
	D.C. Resistance: 14.2Ω
PLAYBACK HEAD	Type: P4-150
	Gap: 1 micron
	Impedance: 1,250\Omega ±15\% at 1 kHz
•	

TRANSISTORS	2SA628(D) (E) 2	2SC711(E) (F) 4
	2SC458(C) (D) 6	2SC1098 1
	2SC458LG(C) 4	2SC1247A(B) (V) 2
	2SC458LG(C) (D) 6	2SC1312(G) 2
I.C.	LD31414	
DIODES	1N34A6	WZ085 2
	10DC1 (Blk) 1	WZ2401
	WG5996	
FET	2SK30A (GR) 2	
POWER SUPPLY	100 to 240V A.C. 50/60 Hz	for Universal models
	120V A.C. 60 Hz for CSA/U	L models
	220V A.C. 50 Hz for CEE m	odels
POWER CONSUMPTION	40W	
DIMENSIONS	406(W) x 325(H) x 196(D) r	nm (16.0" x 12.8" x 7.7")
WEIGHT	12 kg. (26.4 lbs.)	

NOTE: Specifications subject to change without notice.

II. D.C.RESISTANCE OF VARIOUS COILS

The D.C. Resistance values shown in this chart are average values.

PART	DESIGNATION	D.C. RESISTANCE
MOTOR	SSM-1	Between BLU-RED 120Ω Between BLU-YLW 190Ω
ERASE HEAD	EH-200	2Ω
RECORDING HEAD	P4-154	14.2Ω
PLAYBACK HEAD	P4-150	90Ω
HEADPHONE TRANSFORMER	N16-535S	Primary 565Ω ±15% Secondary 0.95Ω ±15%
OSCILLATOR COIL	OT-204	Between 1-3 0.3Ω Between 4-6 0.7Ω Between 7-9 8.4Ω
POWER TRANSFORMER	LET-16	Refer to Fig. 1

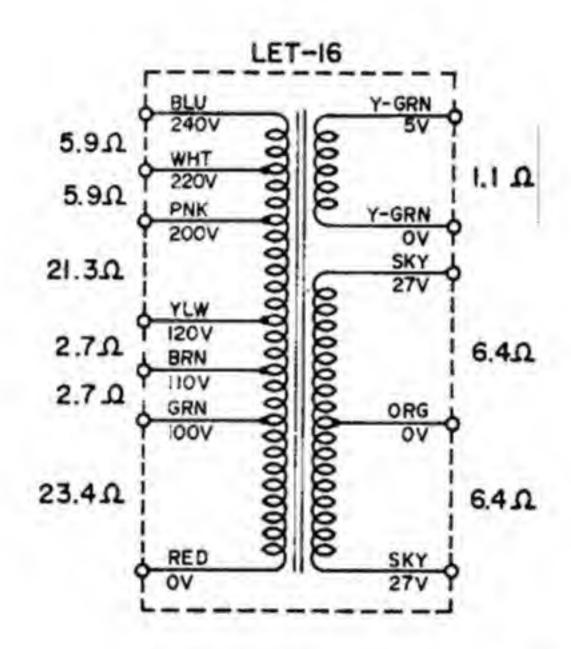


Fig. 1

1. TAPE SPEED DEVIATION

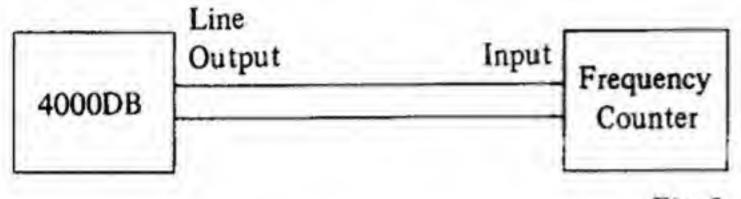
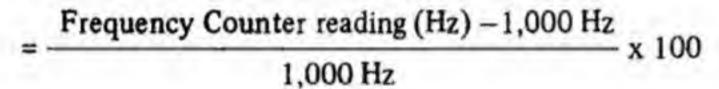


Fig. 2

As shown in Fig. 2, connect a Frequency Counter to the Line Output of Model 4000DB. Playback a 1,000 Hz pre-recorded test tape. Take a Frequency Counter reading at the beginning, middle, and end of tape winding during playback and obtain the tape speed deviation from the following formula.

TAPE SPEED DEVIATION (%)



2. WOW AND FLUTTER

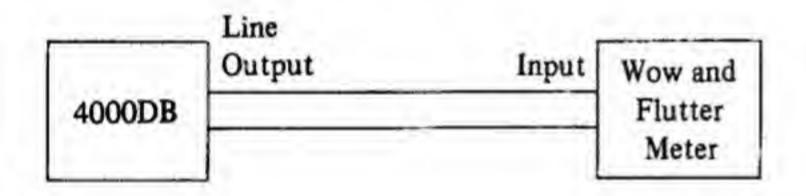


Fig. 3

Method A

As shown in Fig. 3, connect a Wow and Flutter Meter to the Line Output of Model 4000DB. Playback a 3,000 Hz pre-recorded test tape and take a Wow and Flutter reading at the beginning, middle, and end of tape winding during playback.

The maximum value on these respective readings will represent the Wow and Flutter.

Method B

Supply a 3,000 Hz sine wave signal from an Audio Frequency Oscillator and make a recording on a blank tape at the beginning, middle, and end of tape winding. Rewind and playback the resultant signal. Measure Wow and Flutter with a Wow and Flutter Meter. (The Wow and Flutter value of method B will be close to 2 times of method A.)

3. FREQUENCY RESPONSE

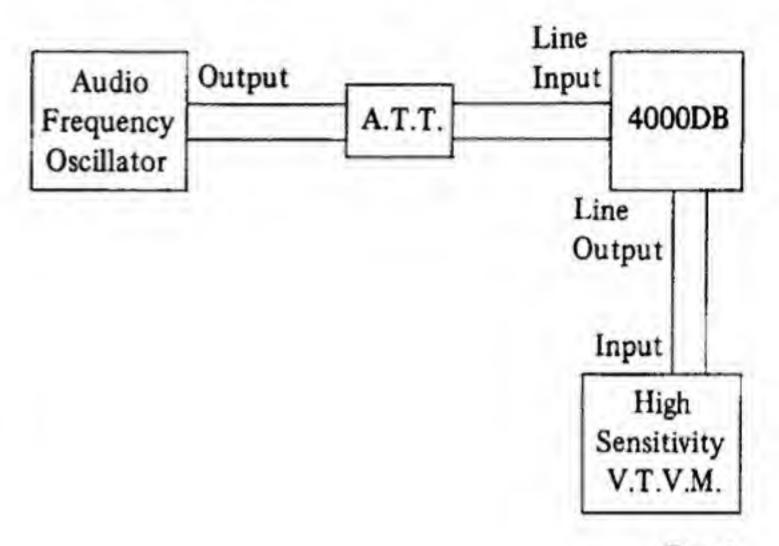


Fig. 4

For measuring Frequency Response, connect instruments as shown in Fig. 4 and proceed as follows.

- Supply a 1,000 Hz sine wave signal to the Line Input of Model 4000DB from an Audio Frequency Oscillator through an Attenuator.
- Set Deck to recording mode and turn recording level control to maximum. Adjust Attenuator to obtain a 0 dBm High Sensitivity V.T.V.M. reading.
- 3) Under conditions described in 2) above, readjust Attenuator so that the Line output is -20 dBm, and record 40 to 20,000 Hz spot frequencies.
- 4) Take High Sensitivity V.T.V.M. spot frequency readings and plot the values on a graph.

NOTE: When measuring Frequency Response, new tape should be used.

4. SIGNAL TO NOISE RATIO

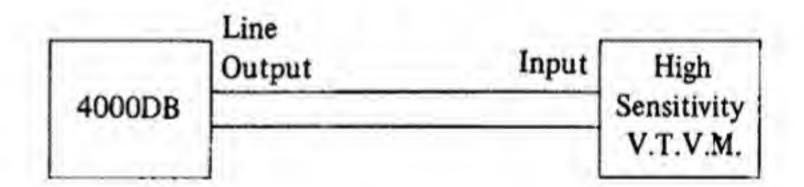
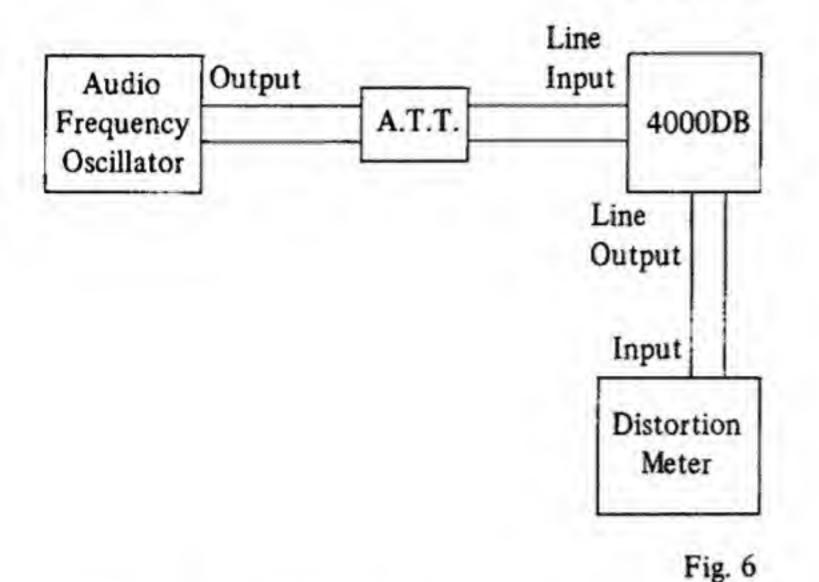


Fig. 5

As shown in Fig. 5, connect a High Sensitivity V.T.V.M. to the Line Output of Model 4000DB. Playback a 250 Hz 0VU pre-recorded test tape and measure the Output level. Then remove the tape and measure the noise level under the same condition. Convert each of the measured values into decibels.

5. TOTAL HARMONIC DISTORTION

FACTOR



Connect the measuring instruments as shown in Fig. 6 and record a 1,000 Hz sine wave signal at 0 VU. Playback the resultant signal and measure the overall distortion factor.

NOTE: 1. At this time, distortion of the Audio Frequency Oscillator must be sufficiently small.

When measuring the distortion factor, new tape should be used.

6. CROSS TALK

(Cross talk between the tracks)

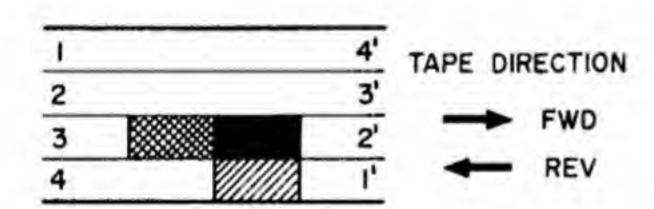


Fig. 7

As shown in Fig. 7 first record a 1,000 Hz sine wave signal on track No. 3 at +3VU level. Next, record under a non-input condition. Then playback the tape on track No. 3 and 1' (reversed condition of tape) through the B.P.F. (1,000 Hz Band Pass Filter, sensitivity 1,000 Hz, ratio 1:1) and obtain the ratio from the following formula.

$$C = 20 \log \frac{E_0}{E_2 - E_1}$$
 (dB)

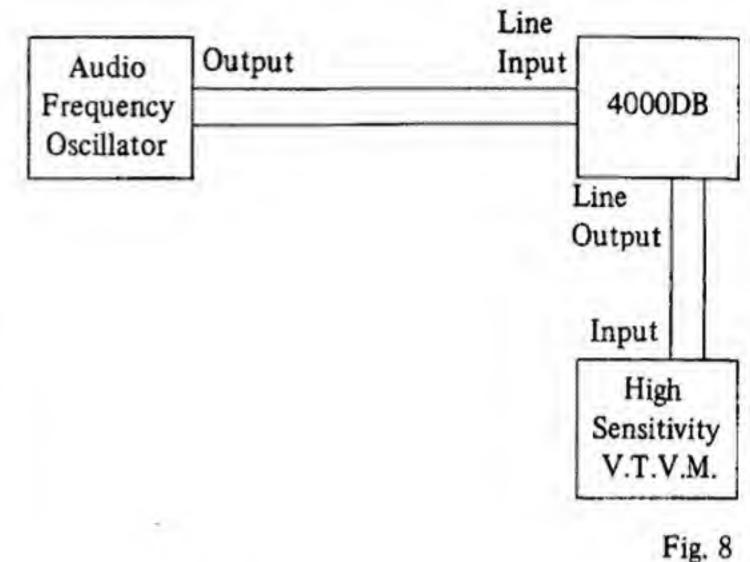
Where, C = Desired cross talk ratio (dB)

 $E_0 = 1,000 \text{ Hz signal output level (V)}$

 $E_2 = 1,000 \text{ Hz cross talk level (V)}$

 $E_1 = Non-input cross talk level (V)$

7. ERASE RATIO



As shown in Fig. 8, connect a High Sensitivity V.T.V.M. to the Line Output. Playback a virgin tape and take a V.T.V.M. reading of the output level. Next record a 1,000 Hz sine wave signal at +3VU, then playback this recorded signal and take a V.T.V.M. reading of the output level. Next, using this pre-recorded tape, record under a non-input condition and take a reading of the noise level output of the erased signal and obtain a ratio bet-

$$Er = 20 \log \frac{E_0}{E_2 - E_1}$$
 (dB)

ween the two from the following formula:

Where, Er = Desired erase ratio (dB)

 $E_0 = 1,000 \text{ Hz signal output level (V)}$

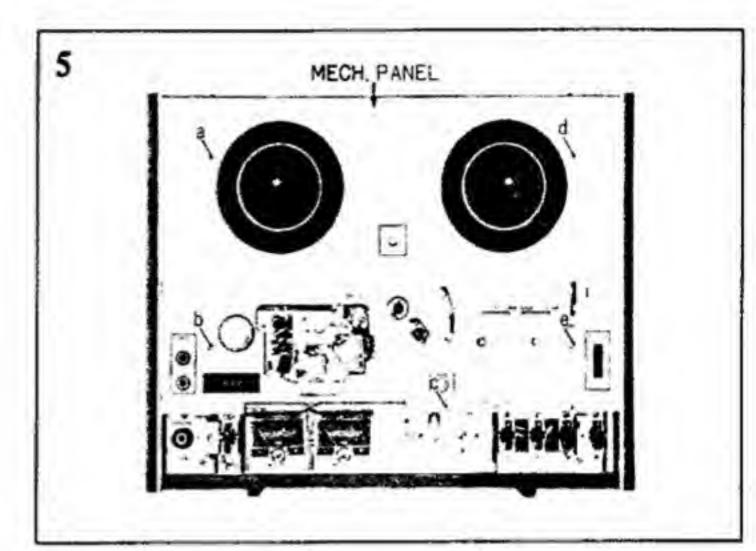
 E_2 = Non-input signal recorded level (V)

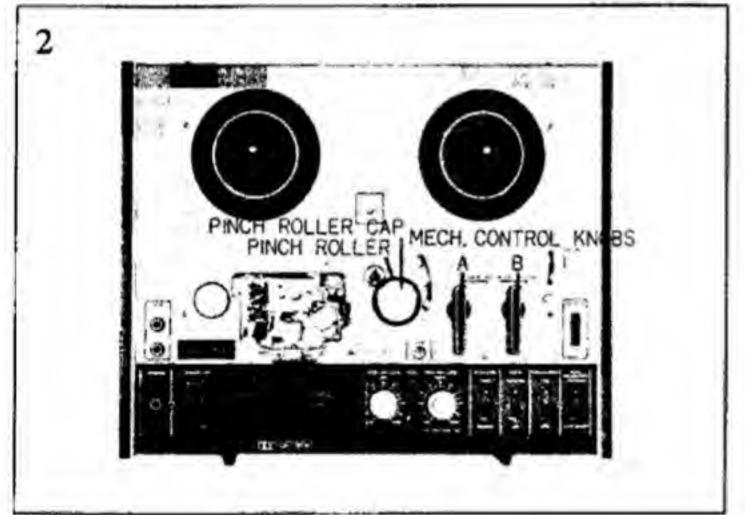
 $E_1 = Virgin tape noise output level (V)$

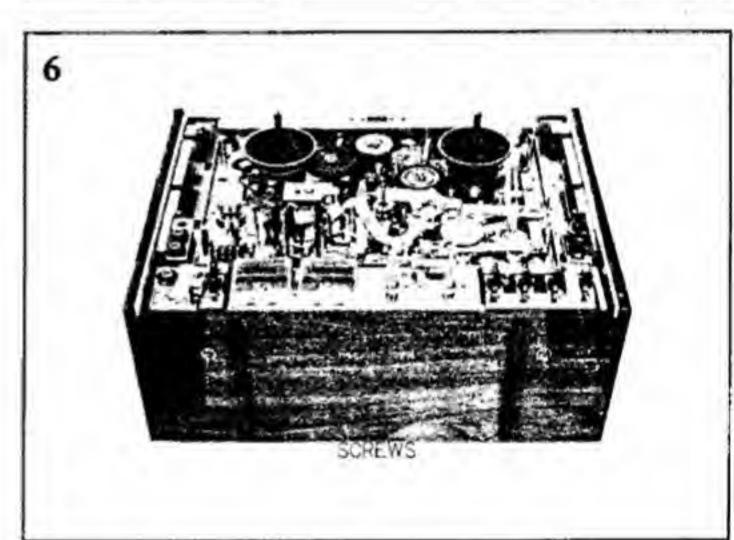
IV. DISMANTLING OF UNIT

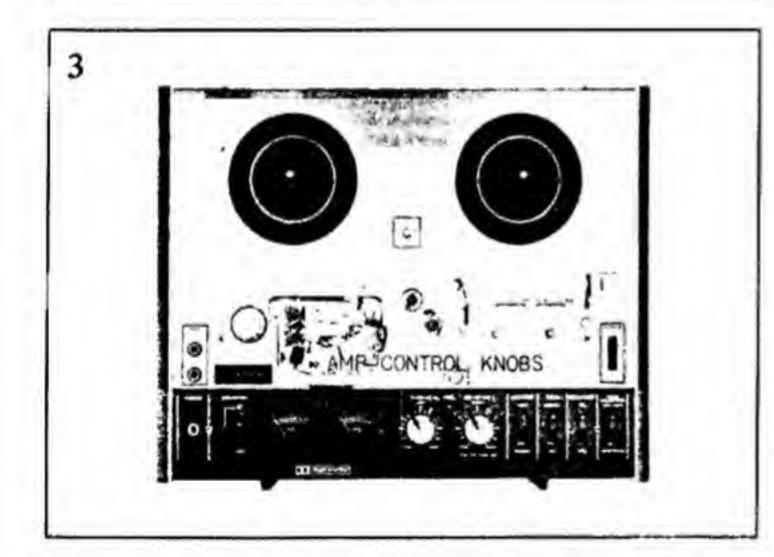
In case of trouble, etc. necessitating disassembly, please disassemble in the order shown in photographs. Reassemble in reverse order.

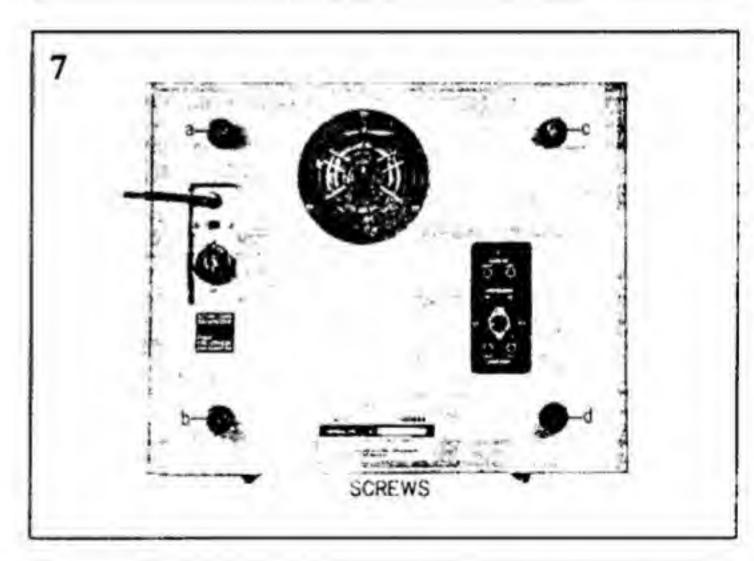


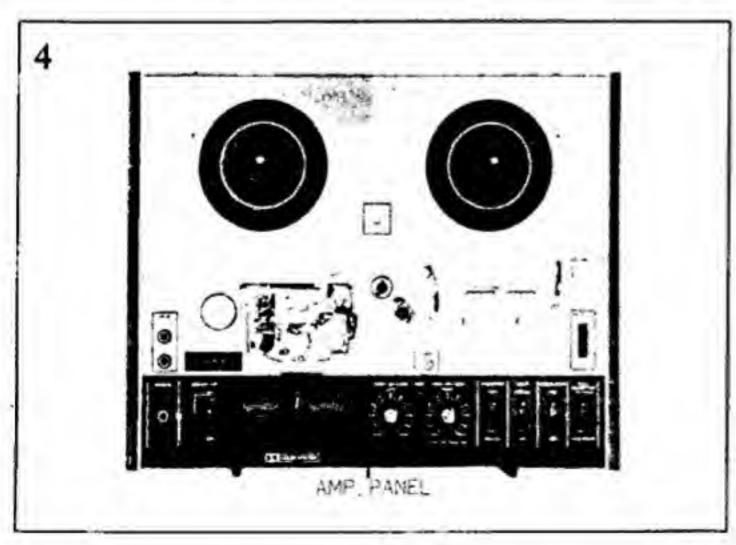


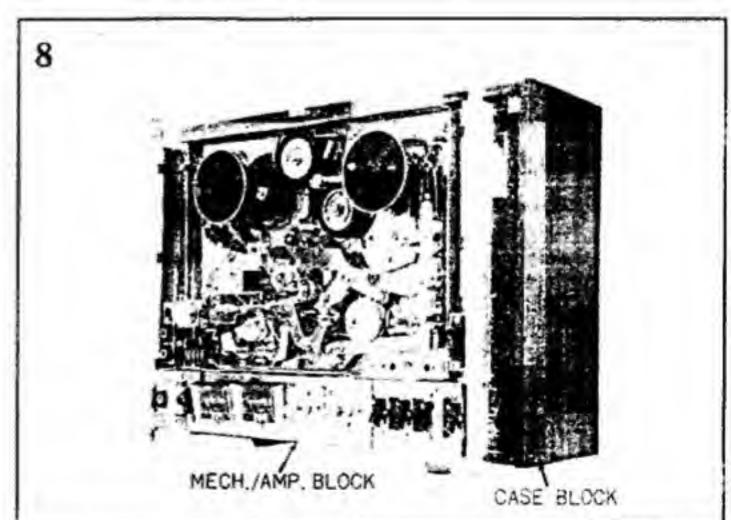


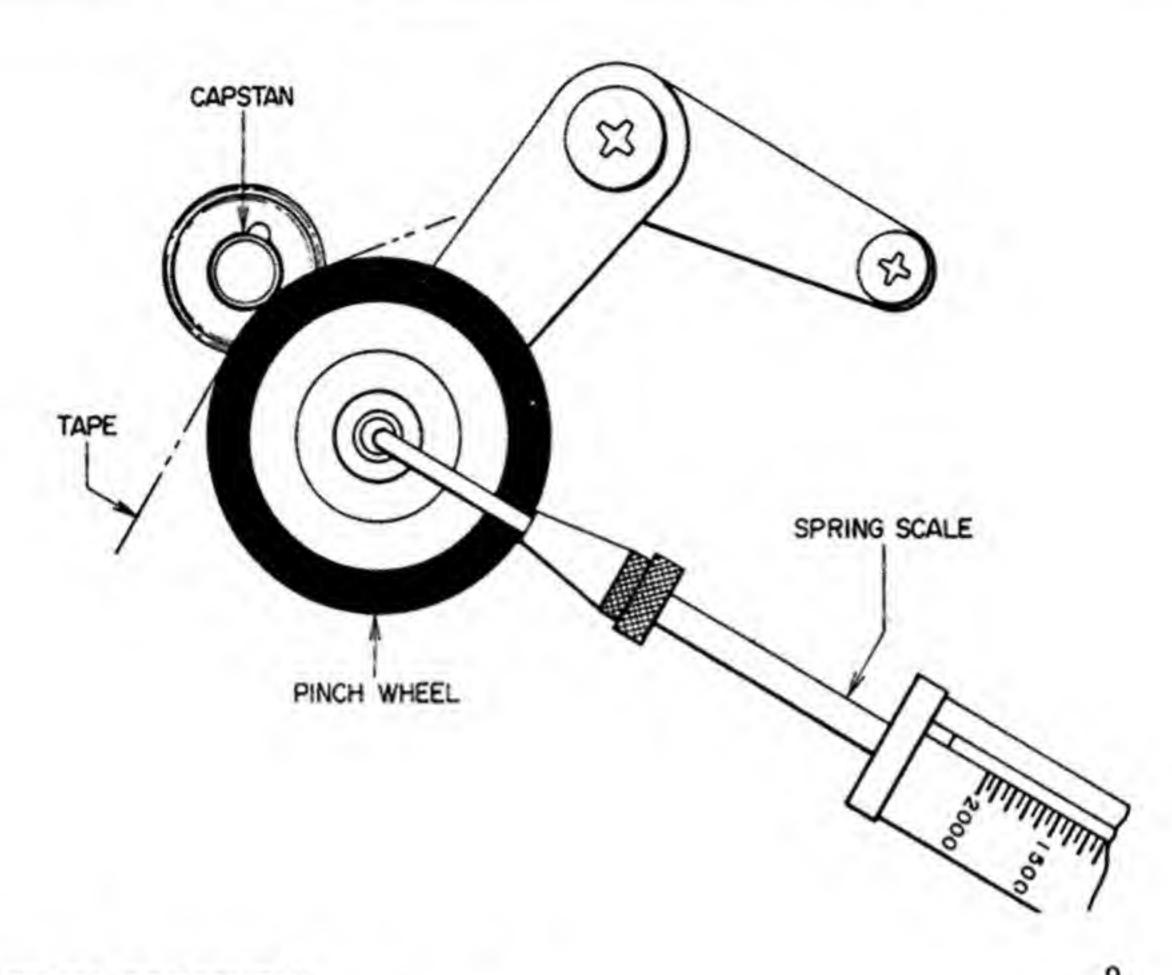












1. PINCH WHEEL PRESSURE MEASUREMENT (See Fig. 9)

It is important that the pinch wheel shaft be kept in perfect alignment with the capstan shaft. Proper pinch wheel pressure is between 1,150 to 1,200 gr-cm when the unit is operated at the tape speed of 7-1/2 ips. Any deviation from this specification will result in wow and flutter. Check pinch wheel pressure with a spring scale.

2. SUPPLY REEL SHAFT ASSEMBLY ADJUSTMENT (See Fig. 10 at left)

Felt clutch material (2) is used between the lower side of the reel table base plate (1) and the rewind pulley (3) to protect recording tape from excessive tension during rewind operation. To check the amount of friction of this part, install a 5" reel on which a 60 mm diameter tape is wound and gently pull the end of tape upward with a spring scale. Adjust the number of washers (4) so that the amount of tension is kept between 400 to 500 gr-cm. Other felt clutch material (5) is attached to the supply roller (6) to provide proper slippage during FWD and REC operation. The procedure for checking friction of this part is the same as the foregoing, and between 80 to 100 gr-cm of tension gives best results.

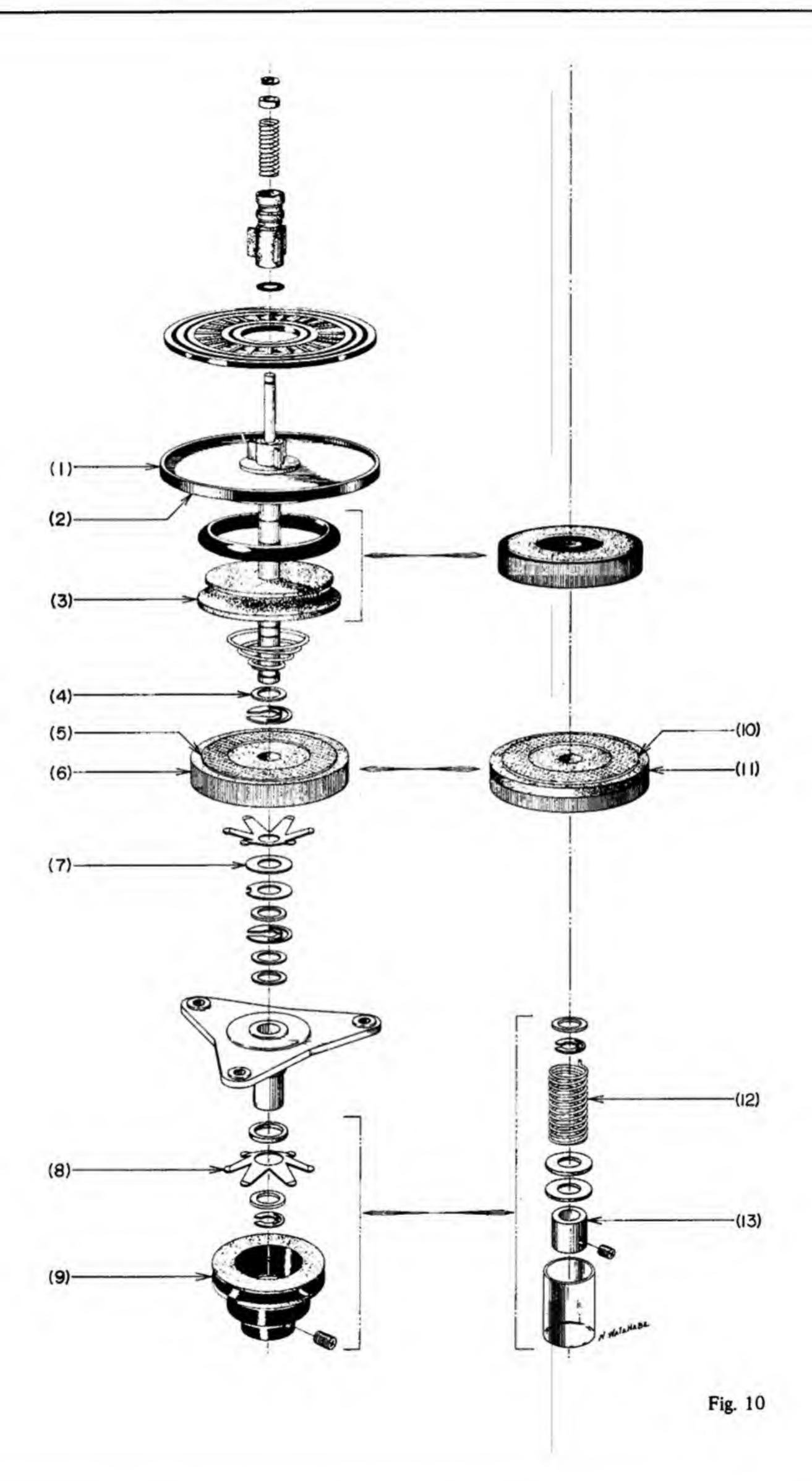
Adjust the number of washers (7) just under the spring. When the unit is set to fast forward operation, the amount of friction will decrease to from 15 to 20 gr-cm. Check to see whether this is satisfactory. If not, adjust the pressure of the set sleeve (9).

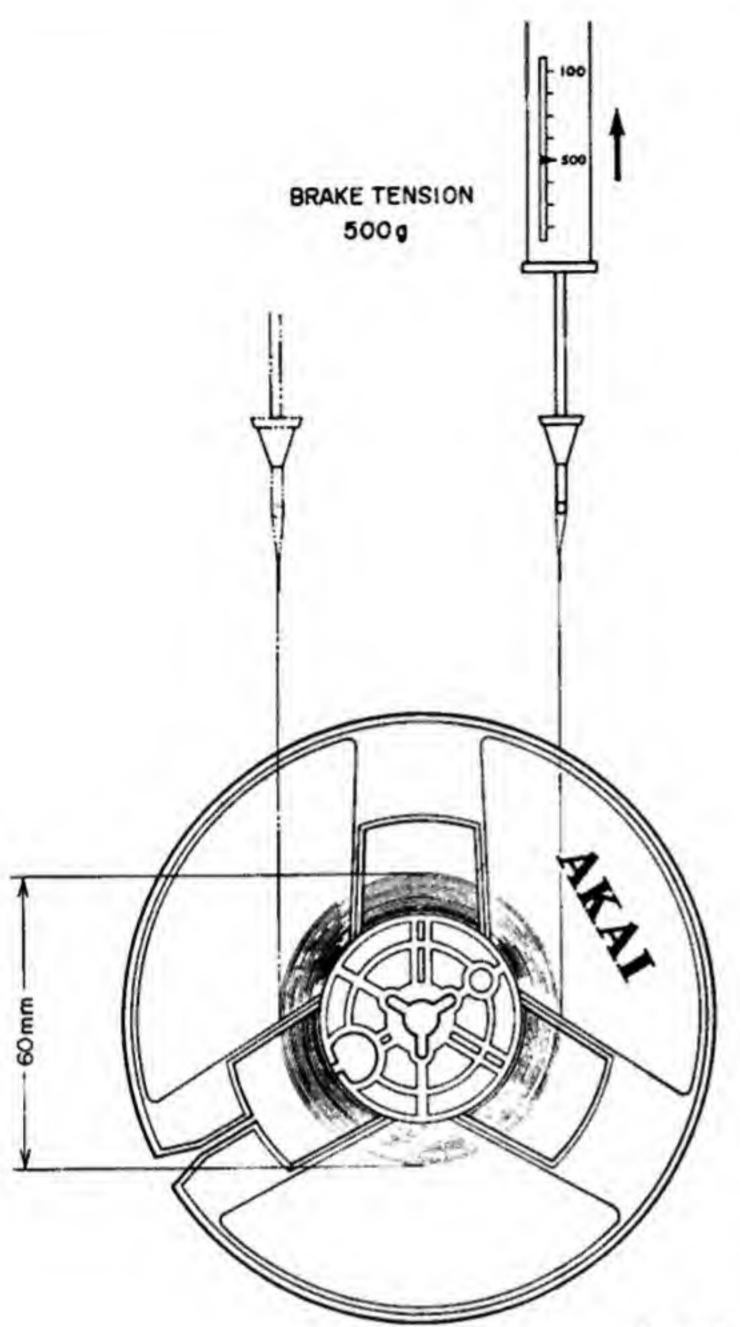
3. TAKE-UP REEL SHAFT ASSEMBLY ADJUSTMENT (See Fig. 10 at right)

Felt clutch material (2) is attached to the bottom side of the reel table base plate (1) so that the recording tape does not stretch during fast forward operation due to excessive tension. To check the amount of friction of this part, install a 5" reel on which a 60 mm diameter tape is wound, and gently pull the end of tape upward with a spring scale. Adjust the number of washers (4) so that the amount of tension at this part is kept between 400 to 500 gr-cm.

Other felt clutch material (10) is attached to the take-up roller (11). This is to provide proper slippage during FWD and REC operation. The procedure for checking friction of this part is the same as the foregoing, and between 150 to 180 gr-cm of friction provides the best results.

Adjust the number of washers (7) just under the spring (11). When the unit is set to rewind operation, the amount of friction of this part will decrease to from 15 to 20 gr-cm. Check to see whether this is satisfactory. If not, adjust the pressure of the pulley (9).





4. DRIVE BELT POSITION ADJUSTMENT (See Fig. 12)

Adjust position of drive belt so that it comes to the center of the motor pulley by inserting a washer (or washers) between the motor prop and mechanism chassis as shown in Fig. 12.

5. FLYWHEEL LOOSE PLAY ADJUSTMENT (See Fig. 13)

With a minus screw driver, turn bearing to left and right and adjust so that when the flywheel is moved as indicated by the arrow mark in the figure, the gap between the steel ball and flywheel supporting plate is 0.3 mm as shown in Fig. 13. Fix at this position with nut.

6. ADJUSTMENT OF IDLER #2 POSITION AT FAST FORWARD MODE (See Fig. 14)

Move Cam © shown in Fig. 14 up and down as indicated by the arrow mark (←→) in the figure and adjust Lever © height so that Idler #2 contact between Take Up Roller A and the knurling Pulley is uniform when the F.FWD/RWD Lever is set to F.FWD position. Fix at adjusted position with Adjustment Screw ① . During operation, confirm that the rotating position of Idler #2 is ideal.

Fig. 11

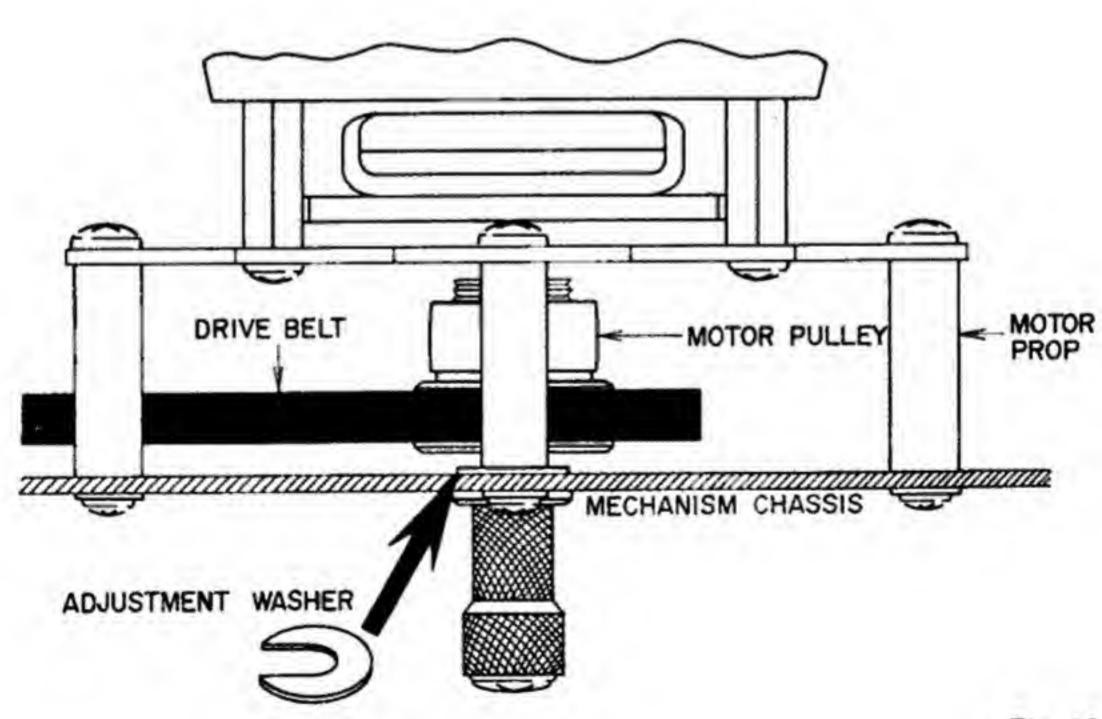


Fig. 12

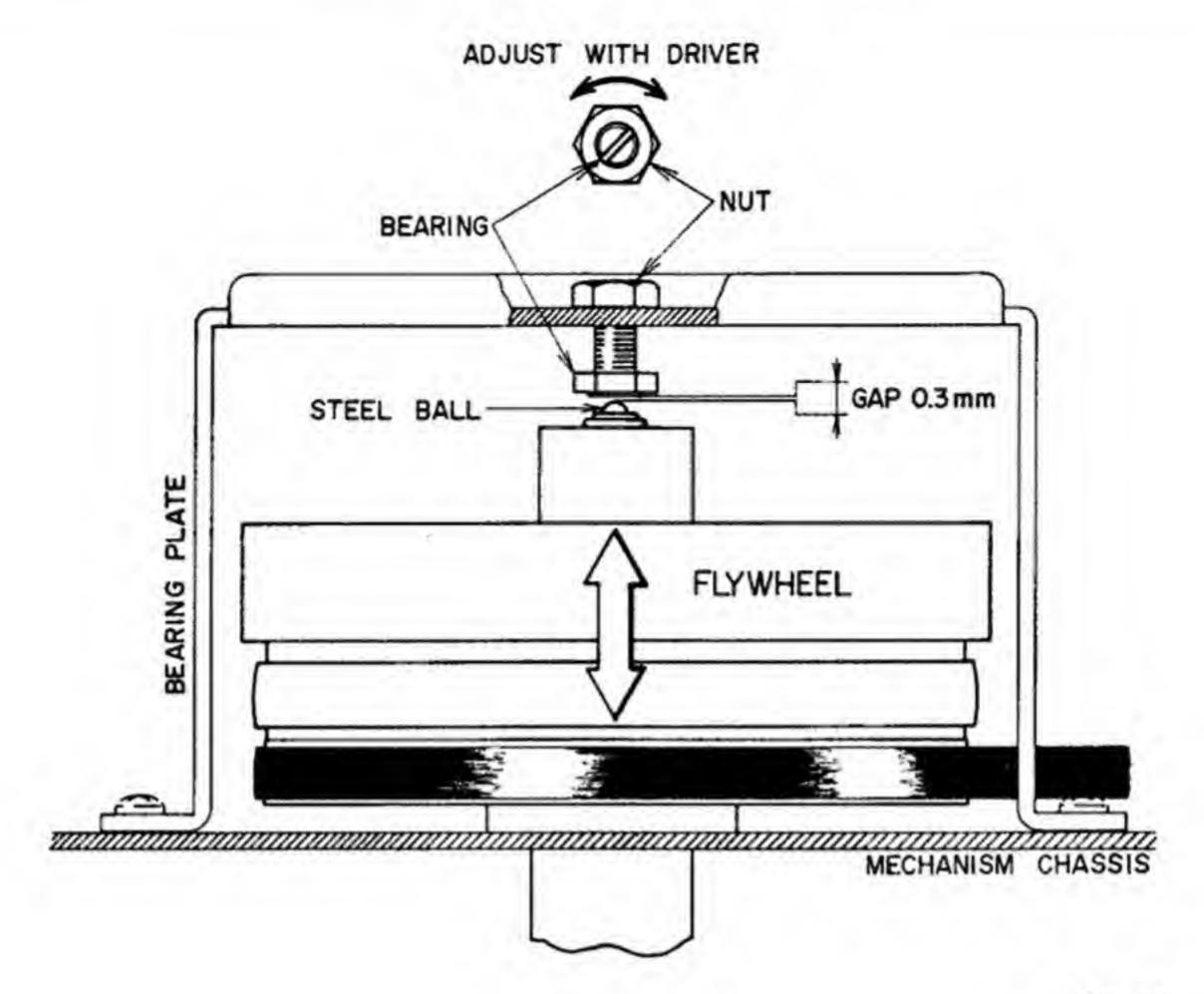


Fig. 13

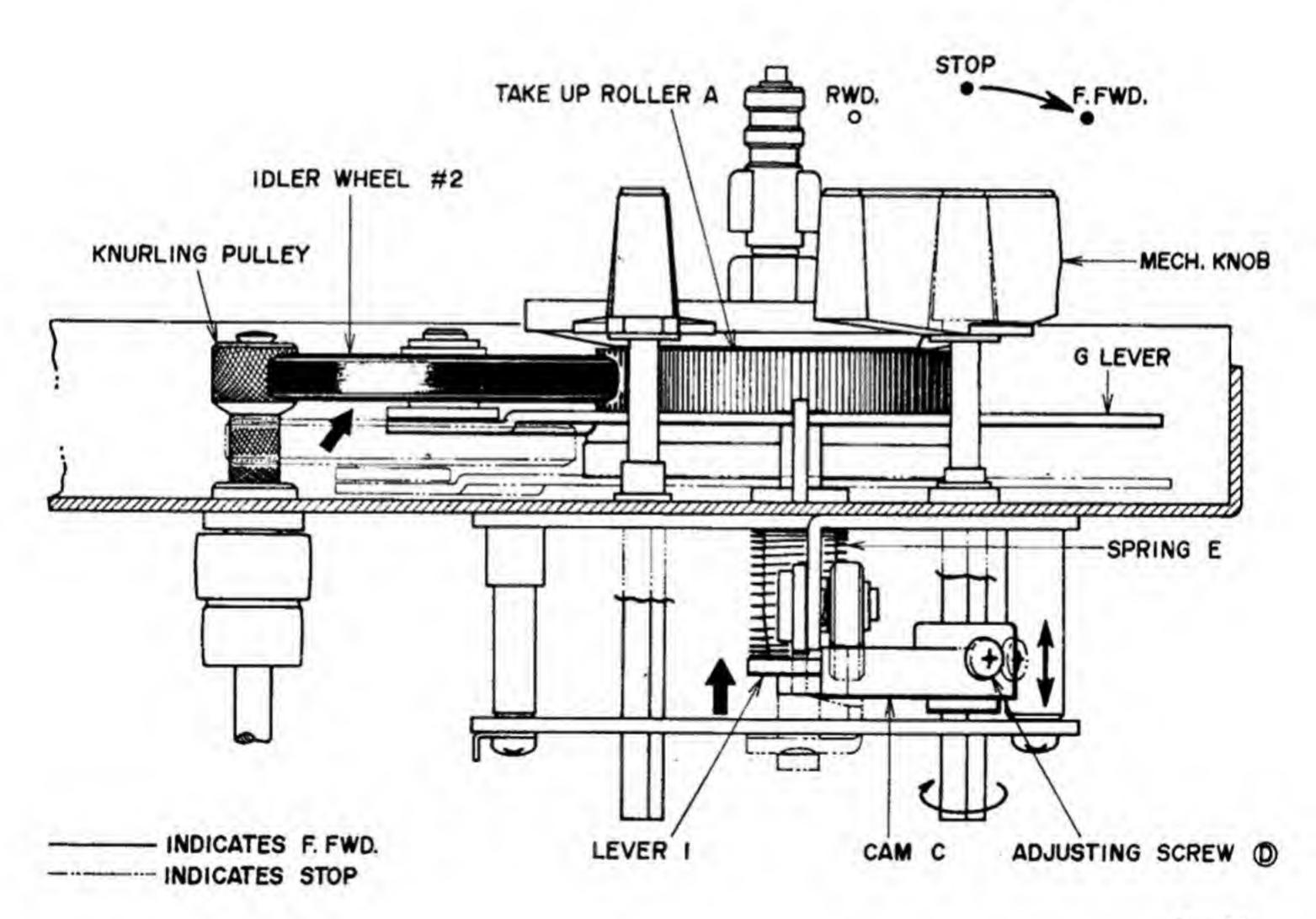


Fig. 14

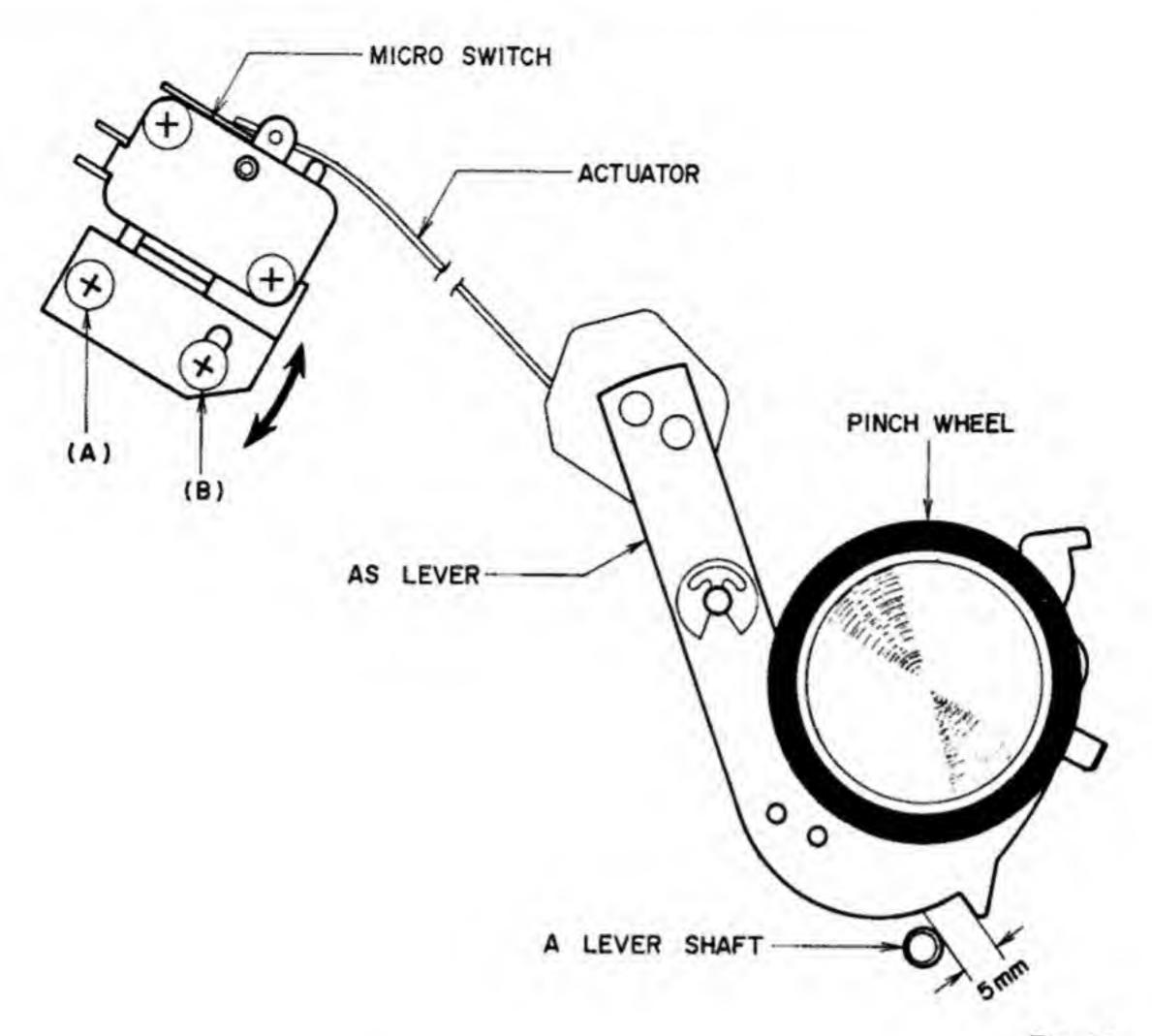
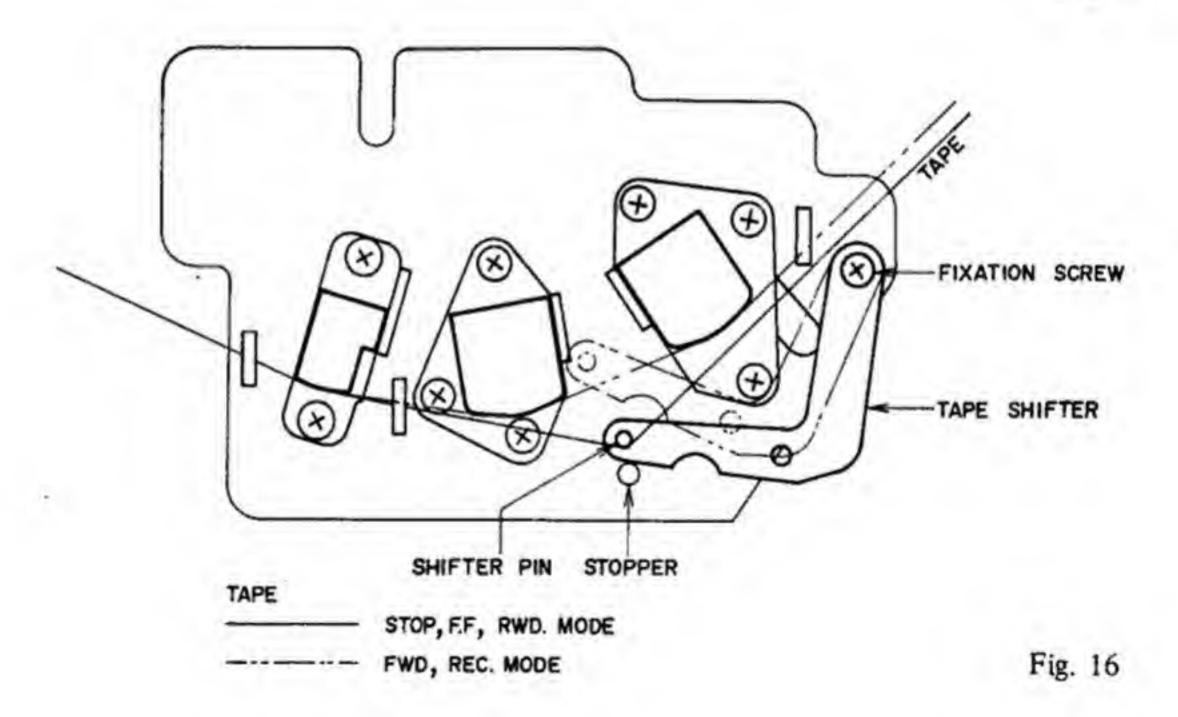


Fig. 15



7. AUTOMATIC SHUT-OFF OPERATING POINT ADJUSTMENT (See Fig. 15)

Loosen screws (A) and (B) and adjust installed position of Micro Switch so that when AS Lever is lowered as a result of the Power Switch being set to SHUT-OFF position, the gap between AS Lever is about 5 mm.

8. SHIFTER LEVER POSITION ADJUSTMENT (See Fig. 16)

- Loosen tape shifter fixation screw and adjust so that at stop mode, the tape shifter contacts the stopper and stops. Tighten fixation screw.
- Confirm that, as shown by · line in the figure, the tape does not touch the shifter pin at Fwd and Rec modes.

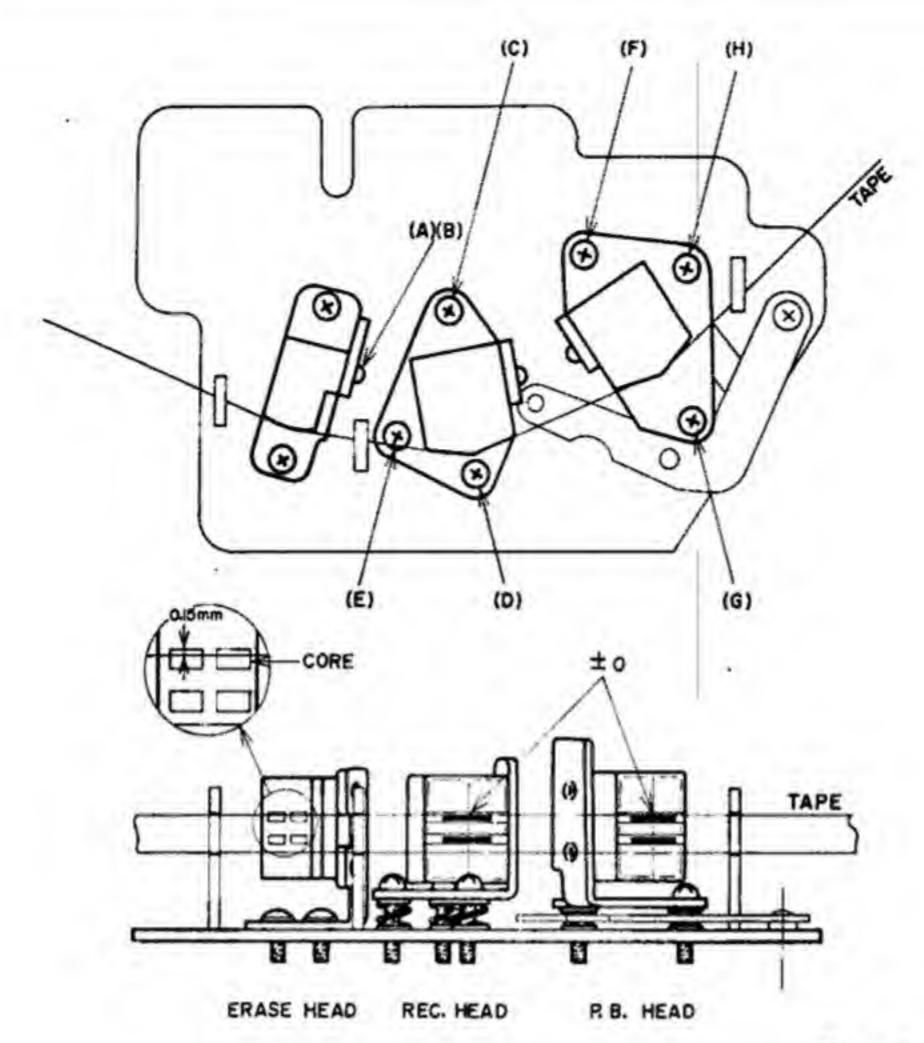


Fig. 17

1. HEAD HEIGHT ADJUSTMENT

(See Fig. 17)

1) Erase Head

Loosen screws (A) and (B) shown in Fig. 17 and adjust erase head height. Tighten screws at position at which the upper edge of the tape is 0.15 mm lower than the upper edge of the left channel head core of the erase head.

2) Recording Head

Adjust head height adjustment screws (C) and (D) shown in Fig. 17 so that the upper edge of the tape and the upper edge of channel 1 head core of the recording head are the same height.

3) Playback Head

Adjust head height adjustment screws (F) and (G) shown in Fig. 17 so that the upper edge of the tape and the upper edge of channel 1 head core of the playback head are the same height.

2. HEAD AZIMUTH ALIGNMENT ADJUSTMENT (See Fig. 17)

1) Playback Head

- a. Connect a High Sensitivity V.T.V.M. to the left and right channel Output Terminals of the tape deck.
- b. Set the Track Selector to STEREO and set the machine to 7-1/2 ips. tape speed.

- c. Playback an 8,000 Hz 3-3/4 ips. alignment adjustment test tape.
- d. Adjust adjustment screw (H) to obtain maximum High Sensitivity V.T.V.M. indication on both channels.

2) Recording Head

- a. Connect an Audio Frequency Oscillator to the line input through an Attenuator, and connect a High Sensitivity V.T.V.M. to the line output. Then load a blank test tape.
- b. Set the Monitor Switch to SOURCE and supply a 16,000 Hz sine wave signal. Adjust the Attenuator or the Line Recording Level Controls to obtain a -20 dBm. High Sensitivity V.T.V.M. indication.
- c. Reset Monitor Switch to TAPE and set deck to recording mode.
- d. Adjust adjustment screw (E) to obtain maximum High Sensitivity V.T.V.M. indication on both channels.

NOTES:

- As head adjustment greatly affects tape deck performance, be sure that these adjustments are carried out properly.
- Be careful not to use magnetized tools near the heads.
- As the level of old tape varies greatly, use new tape.
- Demagnetize heads before and after head adjustment.

VII. AMPLIFIER SYSTEM ADJUSTMENT

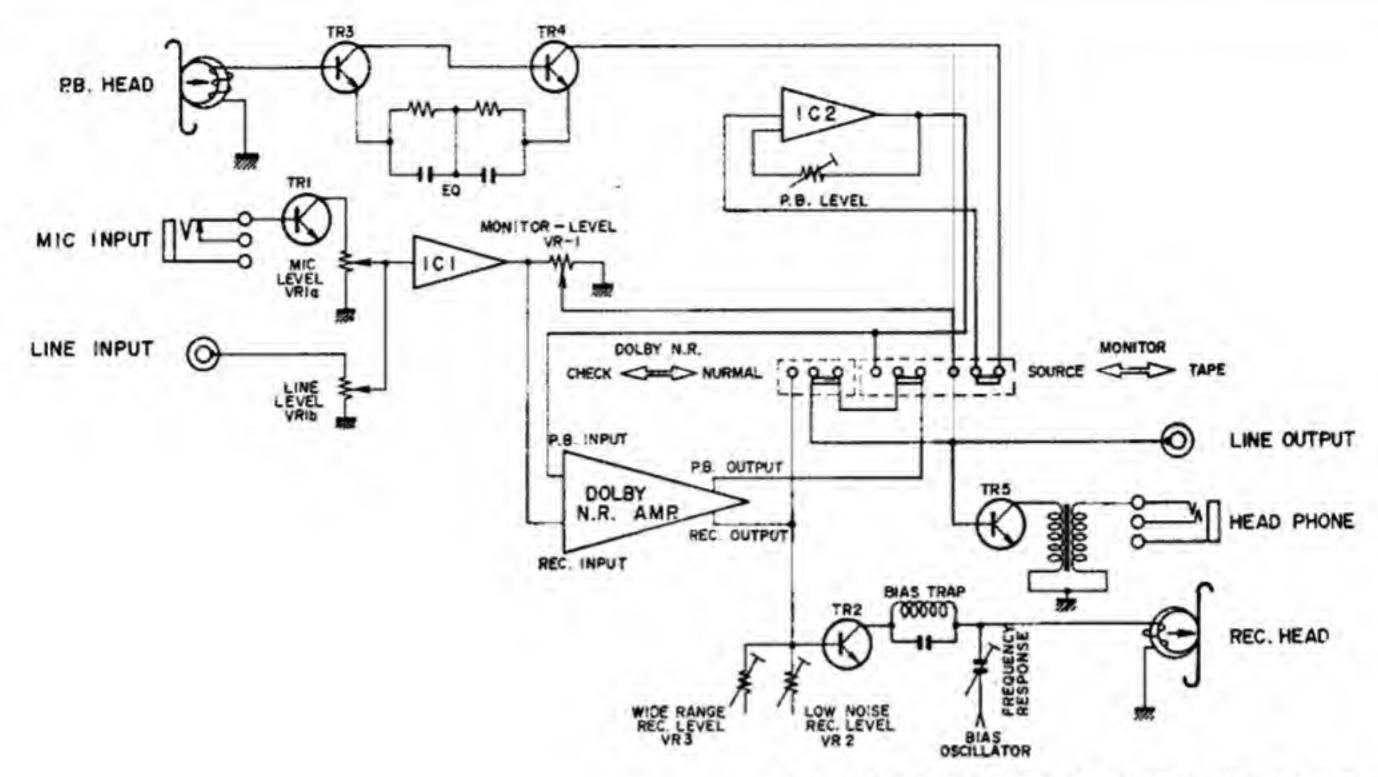


Fig. 18 AMP. SYSTEM BLOCK DIAGRAM

1. CONNECTION OF VARIOUS INSTRUMENTS

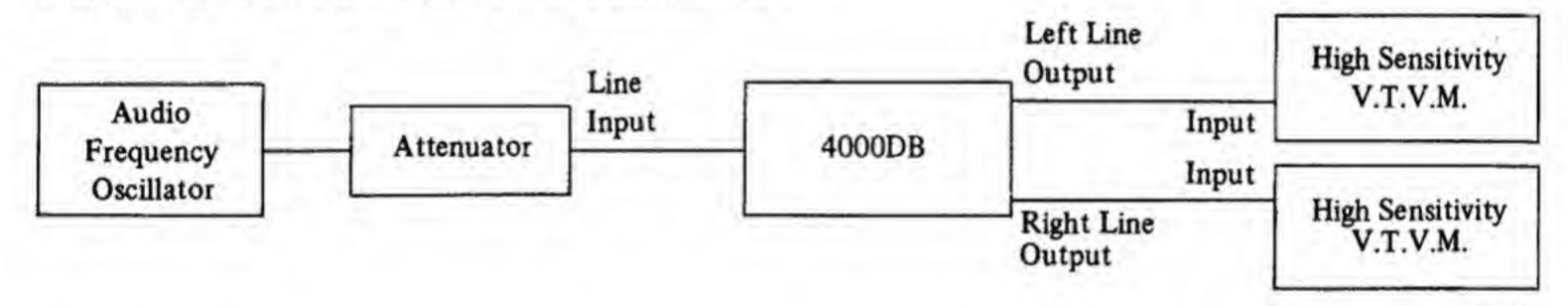


Fig. 19

2. ADJUSTMENT SEMI-FIXED RESISTOR AND TRIMMER CONDENSER POSITION

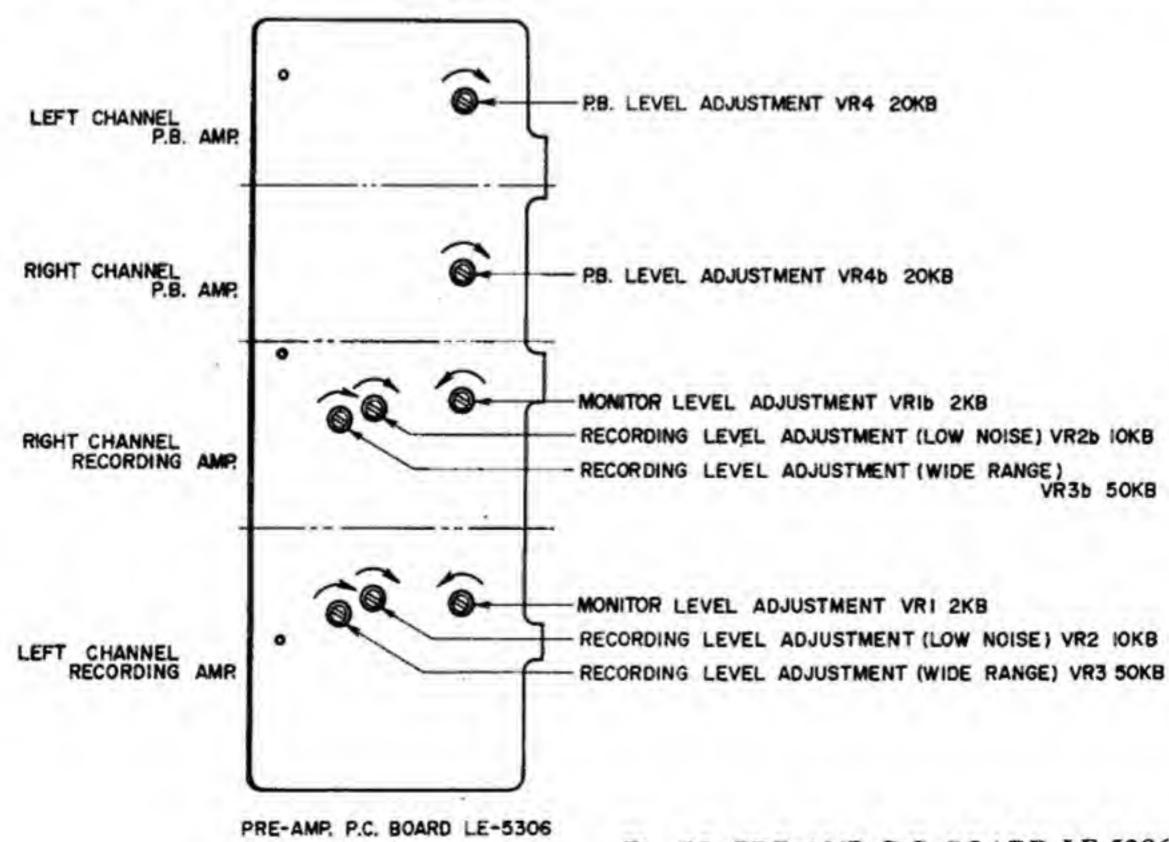
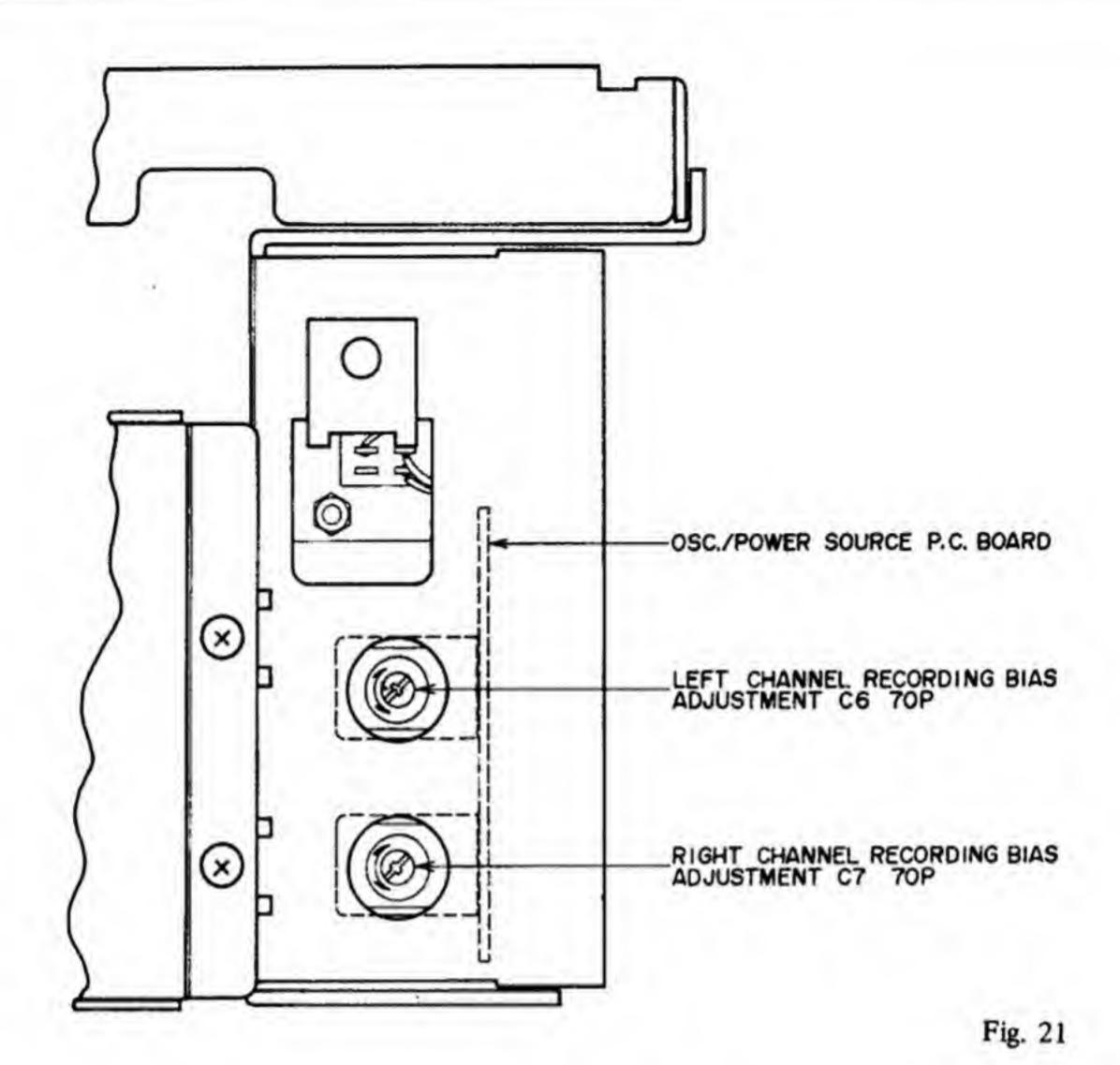
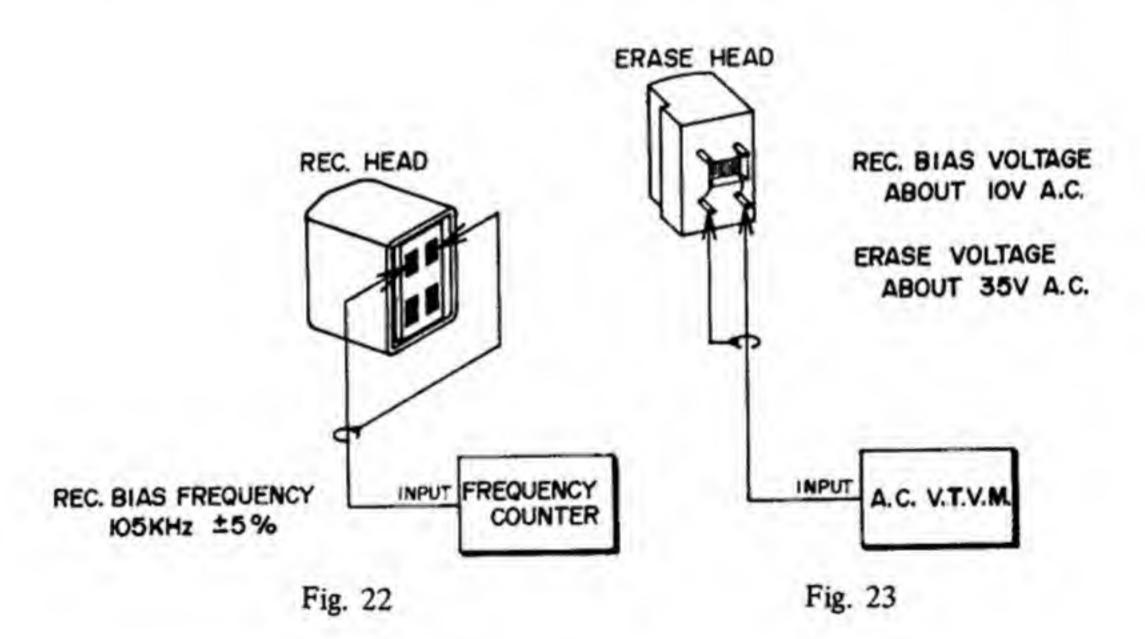


Fig. 20 PRE AMP. P.C. BOARD LE-5306





3. PRIOR TO ADJUSTMENT

Set the Various Amp. Panel Switches and Volumes as shown below prior to adjustment.

- 1) Dolby NR Switch: OFF
- 2) Monitor Switch: TAPE
- 3) S.O.S. Switch: NORMAL
- 4) Equalizer Switch: 7-1/2 ips.
- 5) Tape Selector: LOW NOISE
- 6) Mic Recording Volume: Minimum
- 7) Line Recording Volume: Maximum

4. PLAYBACK LEVEL ADJUSTMENT

(See Figs. 19, 20)

- Playback a 250 Hz 7-1/2 ips. OVU recorded test tape.
- 2) Adjust Pre-Amp. P.C. Board semi-fixed resistors VR4 20 kB (left channel) and VR4b 20 kB (right channel) shown in Fig. 20 to obtain a 0 dBm High Sensitivity V.T.V.M. indication.
- 3) VU Meter scales should register OVU.

5. MONITOR LEVEL ADJUSTMENT

(See Fig. 20)

- Supply a correctly determined 1,000 Hz 70 mV signal to the line input.
- 2) Set Monitor Switch to SOURCE.
- 3) Adjust Pre-Amp. P.C. Board semi-fixed resistors VR1 2 kB (left channel) and VR1b 2 kB (right channel) shown in Fig. 20 to obtain a 0 dBm High Sensitivity V.T.V.M. indication.
- 4) VU Meters should register OVU.

6. RECORDING LEVEL ADJUSTMENT USING LOW NOISE TAPE (See Fig. 20)

- 1) Load a Low Noise blank tape (Scotch #211)
- Supply a correctly determined 1,000 Hz 70 mV signal to the line input.
- Set Monitor Switch to TAPE position, and set deck to recording mode.
- 4) Adjust Pre-Amp. P.C. Board semi-fixed resistors VR2 10 kB (left channel) and VR2b 10 kB (right channel) to obtain a 0 dBm High Sensitivity V.T.V.M. indication.
- 5) VU Meters should register OVU.

Caution: The Tape Selector must be set to LOW NOISE position.

7. RECORDING LEVEL ADJUSTMENT USING WIDE RANGE TAPE (See Fig. 20)

- 1) Load a Wide Range blank tape (Akai SRT Tape).
- Supply a correctly determined 1,000 Hz 70 mV signal to the line input.
- Set Monitor Switch to TAPE position, set Tape Selector to WIDE RANGE, and set deck to recording mode.
- 4) Adjust Pre-Amp. P.C. Board semi-fixed resistors VR3 50 kB (left channel) and VR3b 50 kB (right channel) shown in Fig. 20 to obtain a -1 dBm High Sensitivity V.T.V.M. indication.
- 5) VU Meters should register -1VU.

8. FREQUENCY RESPONSE ADJUSTMENT (Recording Bias Adjustment) (See Fig. 21)

- 1) Load a Low Noise blank tape (Scotch #211).
- Supply a correctly determined 2,000 Hz 70 mV signal to the line input.
- 3) Set Various Switches to positions outlined in Section VII. Item 3.
- 4) Then, decrease the line input by 20 dB by adjusting the attenuator.
- 5) Set tape deck to recording mode.
- 6) Switch the oscillation frequency of the Audio Frequency Oscillator to and from 2,000 and 20,000 Hz and adjust Osc./Power Supply P.C. Board trimmer condensers C6 70P (left channel) and C7 70P (right channel) shown in Fig. 21 so that the difference in line output level between 2,000 and 20,000 Hz is 0.5 to 1.5 dB. (2,000 Hz/-20 dBm, 20,000 Hz/-19.5 to -18.5 dBm).

9. RECORDING BIAS FREQUENCY CHECK

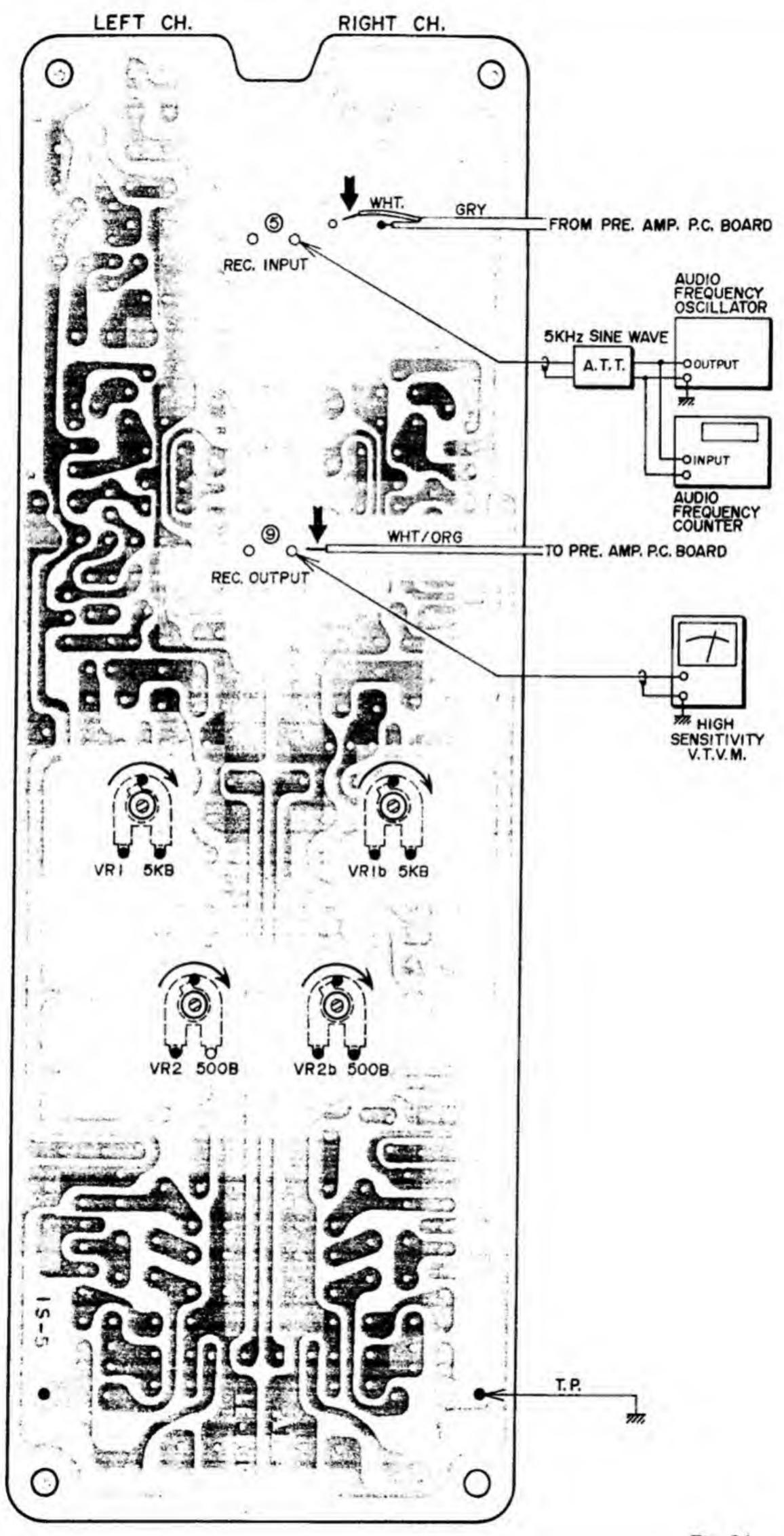
Set deck to recording mode. Connect a Frequency Counter to the recording head terminals as shown in Fig. 22 and take a Frequency Counter reading.

10. RECORDING BIAS VOLTAGE AND ERASE VOLTAGE

Set deck to recording mode. Connect an A.C. Voltmeter to the erase head terminals as shown in Fig. 23 and take a Voltmeter reading.

Then connect Voltmeter to Recording Head terminals and take a Voltmeter reading.

Caution: Use a High Frequency A.C. Voltmeter.



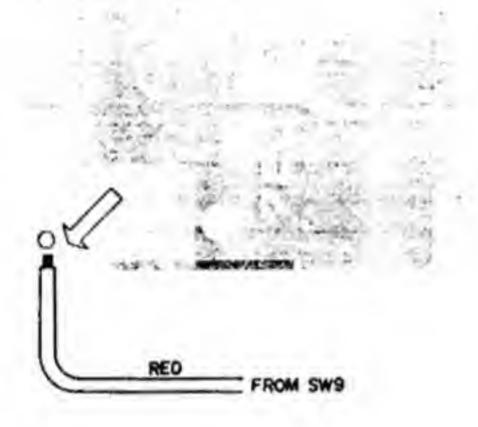


Fig. 25

1. RECORDING DOLBY NR CIRCUIT ADJUSTMENT (See Figs. 24 and 25)

Prior to adjustment, disconnect the wiring (indicated by arrow mark in Fig. 24) from Dolby Circuit recording input ③, and recording output ④. Then connect an Audio Frequency Oscillator to recording input ⑤ and connect a High Sensitivity V.T.V.M. to recording output ⑨.

- * Because bias leak is influenced by this measurement, disconnect the wire indicated by the arrow mark in Fig. 25.
- a. Set deck to recording mode.
- b. Turn F.E.T. Gate Bias adjustment resistors VR1 5 kB and VR2 500B clockwise and set to maximum.
- c. Set Dolby Switch to OFF position, and ground test point.
- d. Supply a 5 kHz (-10 dBm) sine wave signal which has been correctly determined with a Frequency Counter, to the recording input 5 from the Audio Frequency Oscillator.
 - At this time, confirm that the indication of the High Sensitivity V.T.V.M. connected to recording output (9) is 0 dBm.
- e. Next reduce the output of the Audio Frequency Oscillator by 30.5 dB by means of the Attenuator and set the input level to −40.5 dBm. At this time confirm that the indication of the High Sensitivity V.T.V.M. connected to recording output ⑨ is −30.5 dBm.

- f. Set the Dolby Switch to ON position and adjust semi-fixed resistor VR2 500B to obtain an output level of -20.5 dBm at output terminal .
- g. Next, disconnect ground from test point and adjust semi-fixed resistor VR1 5 kB to obtain an output level of -22.5 dBm at output terminal 9.

2. PLAYBACK DOLBY NR CIRCUIT CONFIRMATION

Connect all wires disconnected in Dolby Amp. Adjustment.

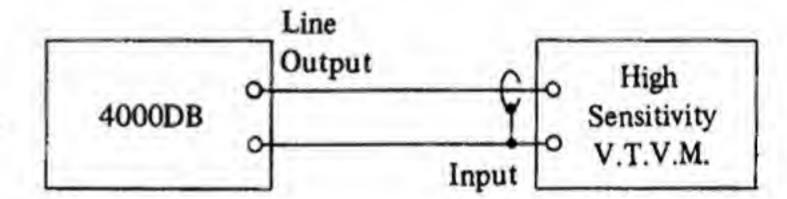


Fig. 26

- a. Connect a High Sensitivity V.T.V.M. as shown in Fig. 26.
- b. Set Dolby Switch to OFF position.
- c. Set Tape Monitor Switch to TAPE position.
- d. Playback a 5 kHz -25 dB 7-1/2 ips. pre-recorded test tape at 7-1/2 ips. (At this time the High Sensitivity V.T.V.M. indicates -25 dB±0.5 dB)
- e. Set Dolby Switch to ON position. At this time, the High Sensitivity V.T.V.M. indication should decrease by 10 dB (to -35 dB±0.5 dB).

NOTE: As precision adjustment is necessary, when making Dolby Amp. P.C. Board adjustments, try to use only precision instruments and set the various volumes accurately.

IX. DOLBY NOISE REDUCTION CIRCUIT OPERATION

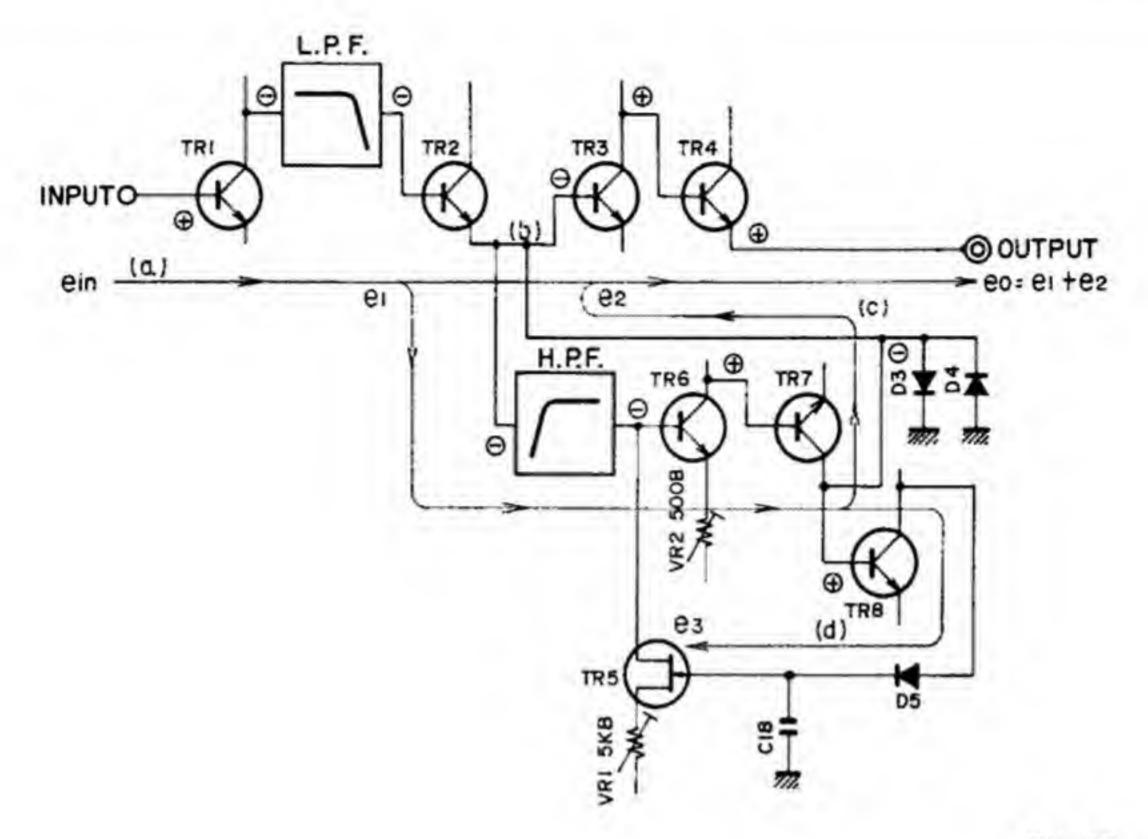
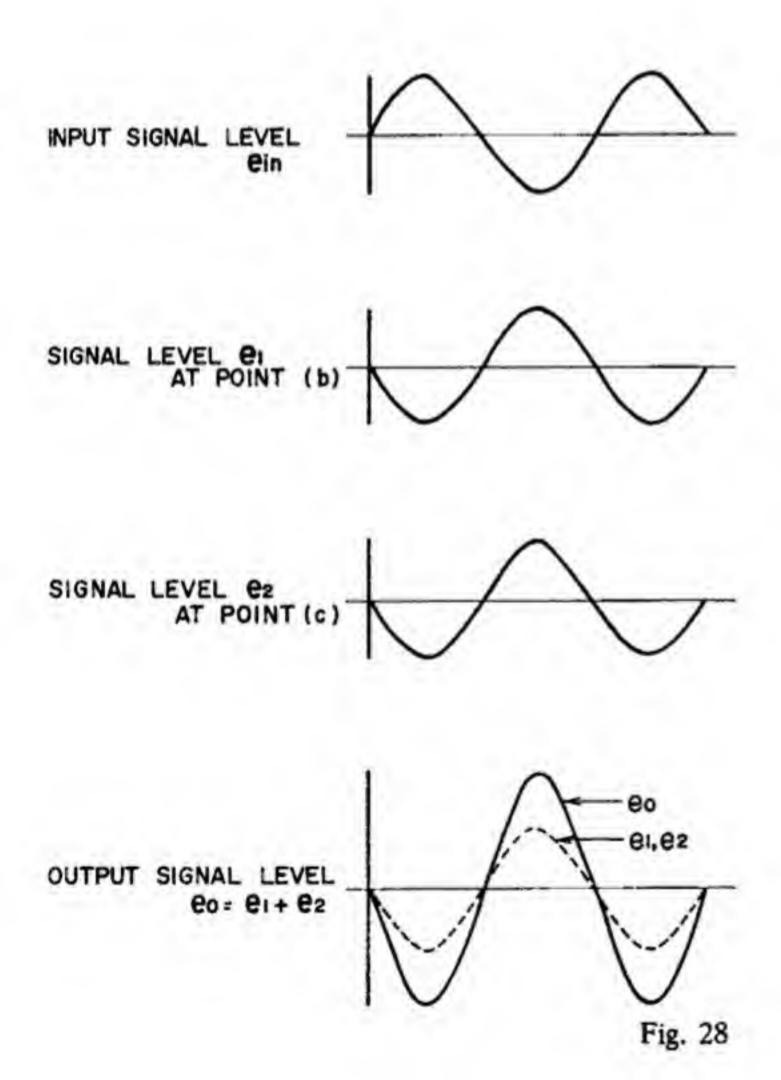


Fig. 27



1. RECORDING DOLBY NR CIRCUIT OPERATION (See Figs. 27 and 28)

- As shown in Fig. 27, at recording time, the input signal passes TR1 and the low pass filter and is supplied to the base of TR2.
- 2) This signal is amplified at TR2 and the over 400 Hz frequency part of the signal emitted passes the high pass filter and is amplified at TR6 and TR7.
- 3) At this time, the signal which passes TR8 is rectified at D5 and supplied to TR5 F.E.T. Gate. This D.C. bias causes the F.E.T. to act as a variable resistor and change the impedance between the drain and source.
- 4) When this input signal is small, because TR5 (F.E.T.) has a certain impedance value which becomes like an electronic attenuator, the input signal supplied to the base of TR6 is controlled by F.E.T. and becomes e₁/k (k represents attenuator constant).

This signal is amplified at TR6 and TR7. If we let A represent the degree of amplification at this time, the output voltage at TR7 collector becomes:

$$e_2 = e_1/k \cdot A \dots$$
 (formula 1)

5) Here, if we let m represent A/k, formula 1 becomes:

$$e_2 = me_1 \dots (formula 2)$$

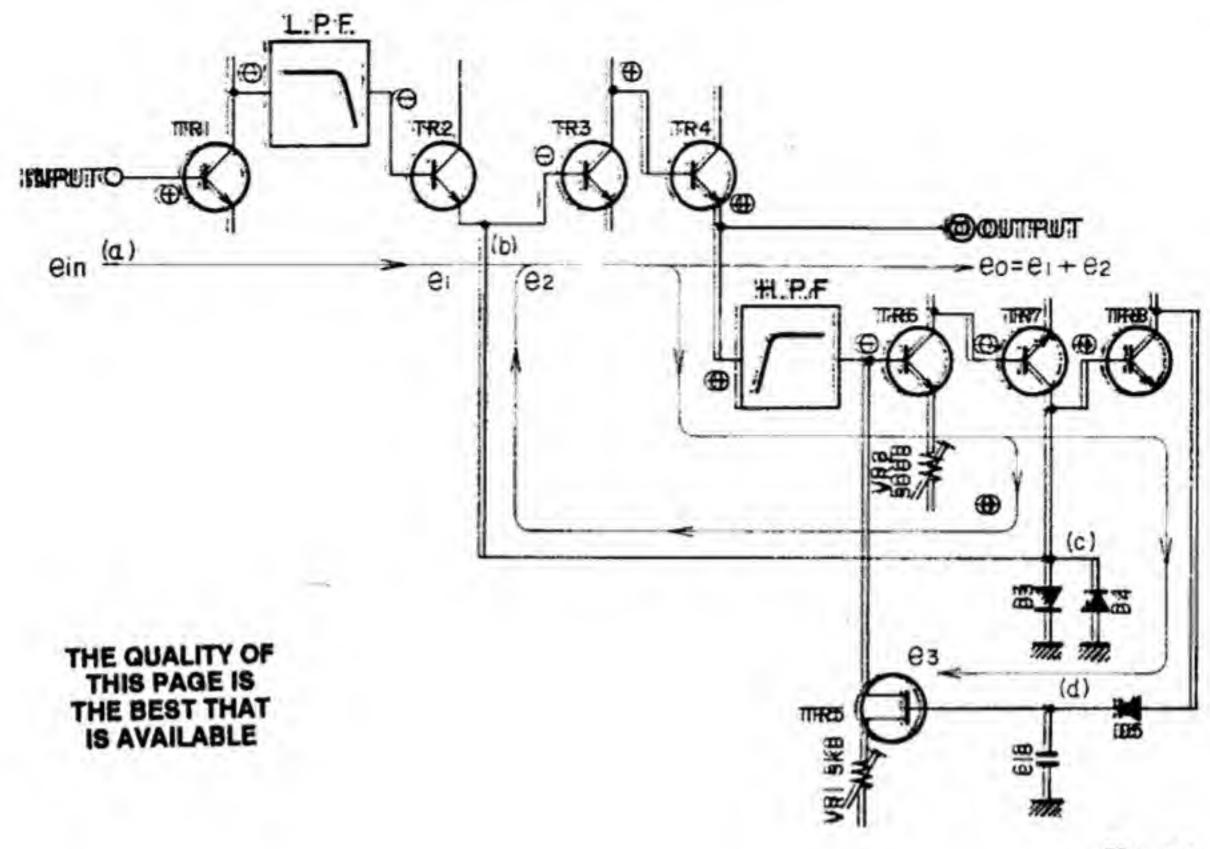
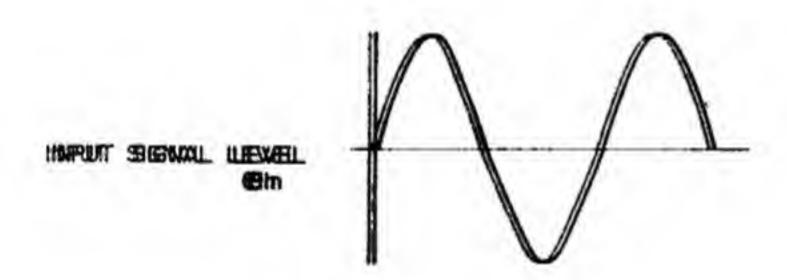
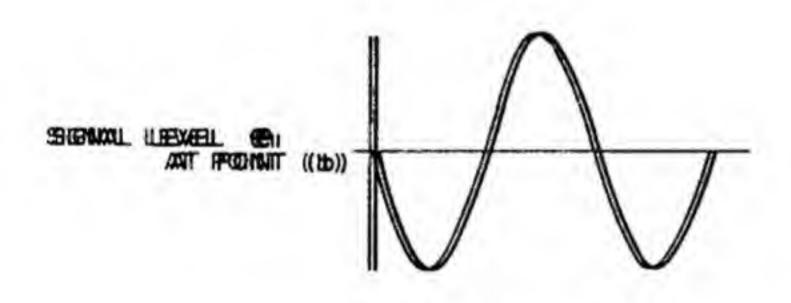
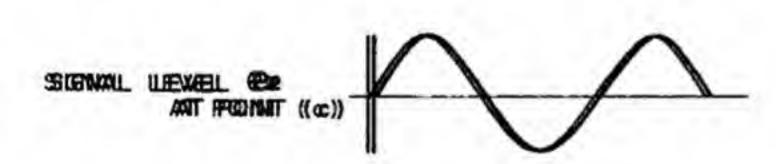


Fig. 229







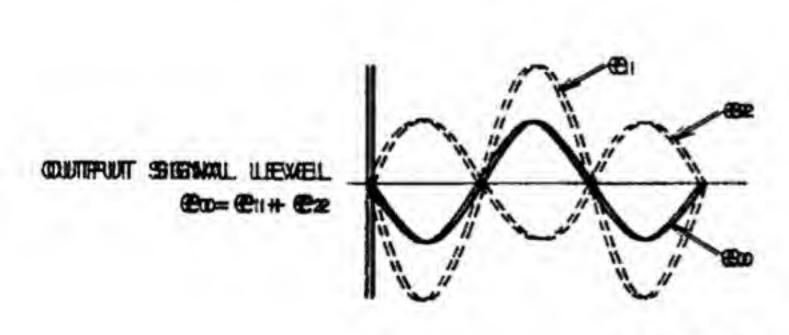


Fig. 30

Because e_0 appearing at the output terminal is the composite signal of e_0 (TR2 output signal) and e_2 (the signal controlled by F.E.T. and which passed point c), e_0 becomes:

$$e_0 = e_1 + e_2 \dots (formula 3)$$

Iff we substitute formula 2 for formula 3

Frunther, at this time en and men are in-phased at point (b). (See Fig. 288)

- 6) At the Dollby neconding cincuit, output signal e₀ is neconded at a 10 dB higher level in relation to a 30 dB hower input level than the Dollby level (See Fig. 31) (Output signal e₀, at over 400 lHz signal, becomes 10 dB higher than the input signal).
- The D.C. Woltage which was amplified at TRS and rectified at D5 also becomes larger. That is to say, the D.C. Bins of TR5 (F.E.T.) increases. When this happens TR5 (F.E.T.) impedance is attenuated. For this reason, e₁ signal level is greatly decreased by F.E.T. function before it is supplied to TR6 base. In other words, because the part of the signal which exceeds the 400 Hz dolby level is attenuated, the situation of e₁ > me₁ develops. Therefore, e₂ = me₁ can be disregarded.
- (8)) Because the output signal becomes $e_0 = e_0$, the nellative ratio of the input and output signals become 1:1 (Fig. 31).

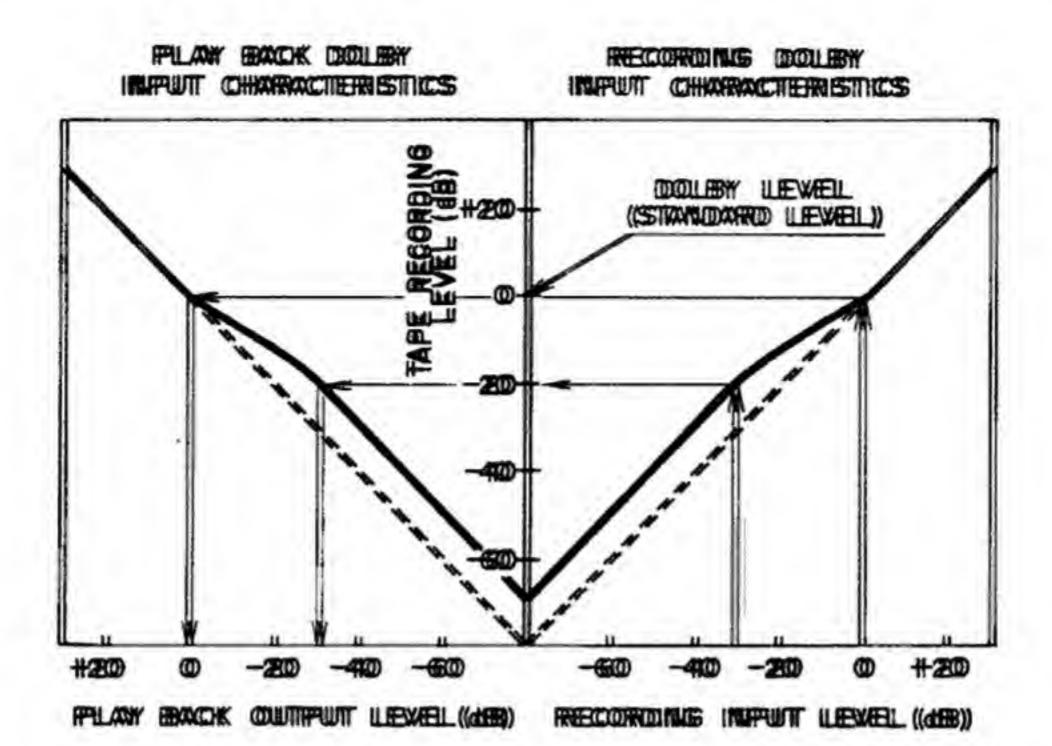


Fig. 31

2. PLAYBACK DOLBY NR CIRCUIT OFERATION (Figs. 29 and 30))

- II)) When the IDolhyized signal is played back, the imput signal passes TIRI and the low pass filter and is amplified at TIR2, TIR3, TIR4. TIR4 out-put signal passes the high pass filter and is amplified at TIR6 and TIR7.
- 22) At this time the signal which passes THES is nextiffied at D5 and supplied to THES (F.E.T.) gate. D.C. Woltage on which was nextified at D5 functions as THES (F.E.T.) D.C. Bias, the importance between F.E.T. dhain and source is changed, and the signal to THE6 base is controlled.
- 3) Signal e₂ appearing at point (c) is supplied as the neverse phase of TIR2 output signal e₁ (See Fig. 30). At this time, the Dolbyized signal nevents to the original signal and the output signal becomes e₀.
- 4) Expressed by a formula, this becomes:

$$\mathbf{e}_0 = \mathbf{e}_1 + ((-\mathbf{e}_2)) \dots ((minus indicates neverse phase))$$

$$= \mathbf{e}_1 + ((-m\mathbf{e}_1)) \dots ((formula 5))$$

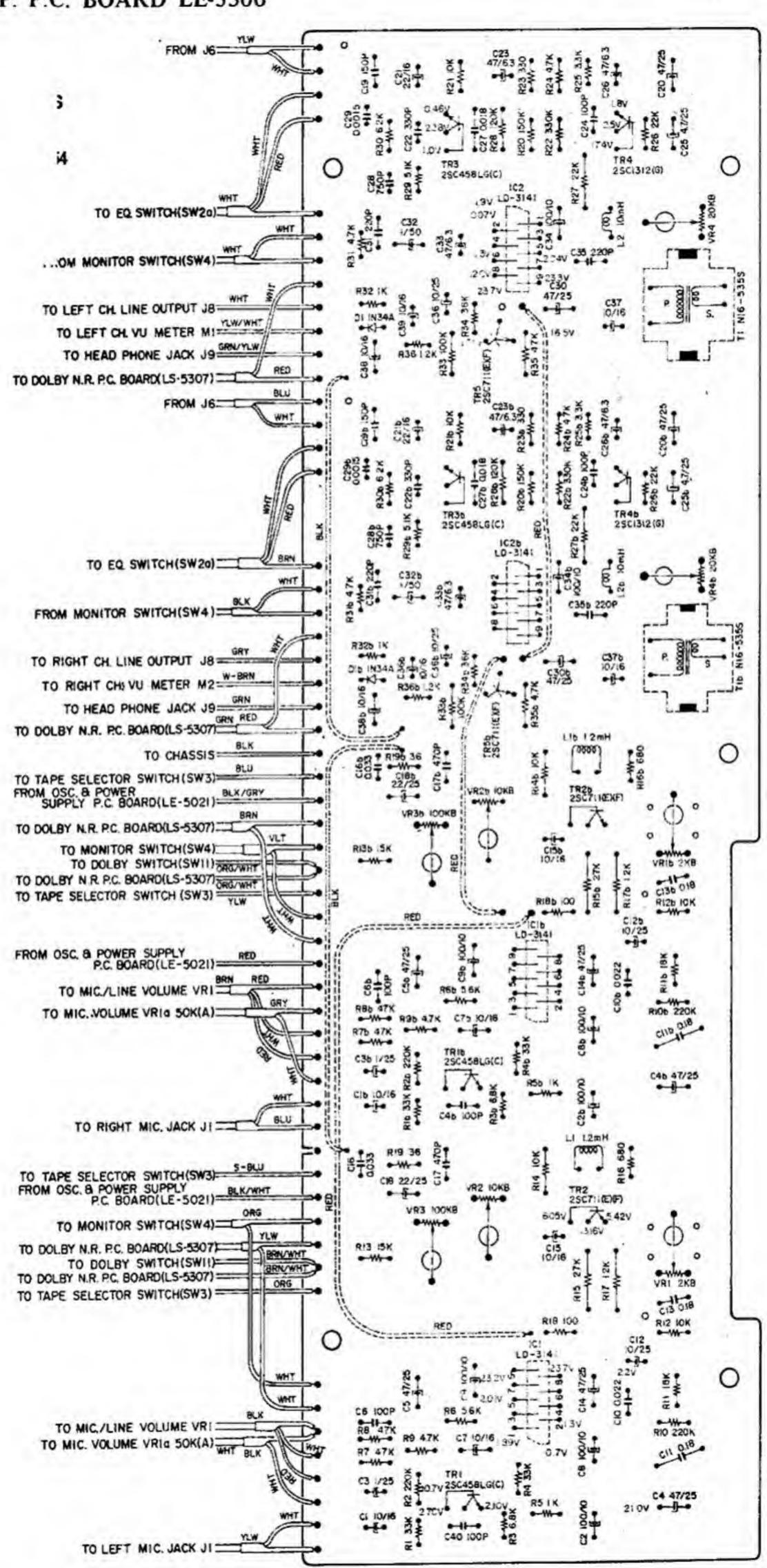
5)) As shown in Fig. 31, with the Playback Dolby NR Circuit signals reconded above the Dolby level are played back at a 1:1 natio, and signals recorded at a level of under -20 dB on the tape (Dolbyized recorded signals) are reduced by 10 dB and played back.

Att this time, because the noise level is also reduced by 100 dB, the S/N ratio is improved. Therefore the difference in function of Recording Dolby Circuit and Playback Dolby Circuit is in the phase relation of the signal supplied to point (b).

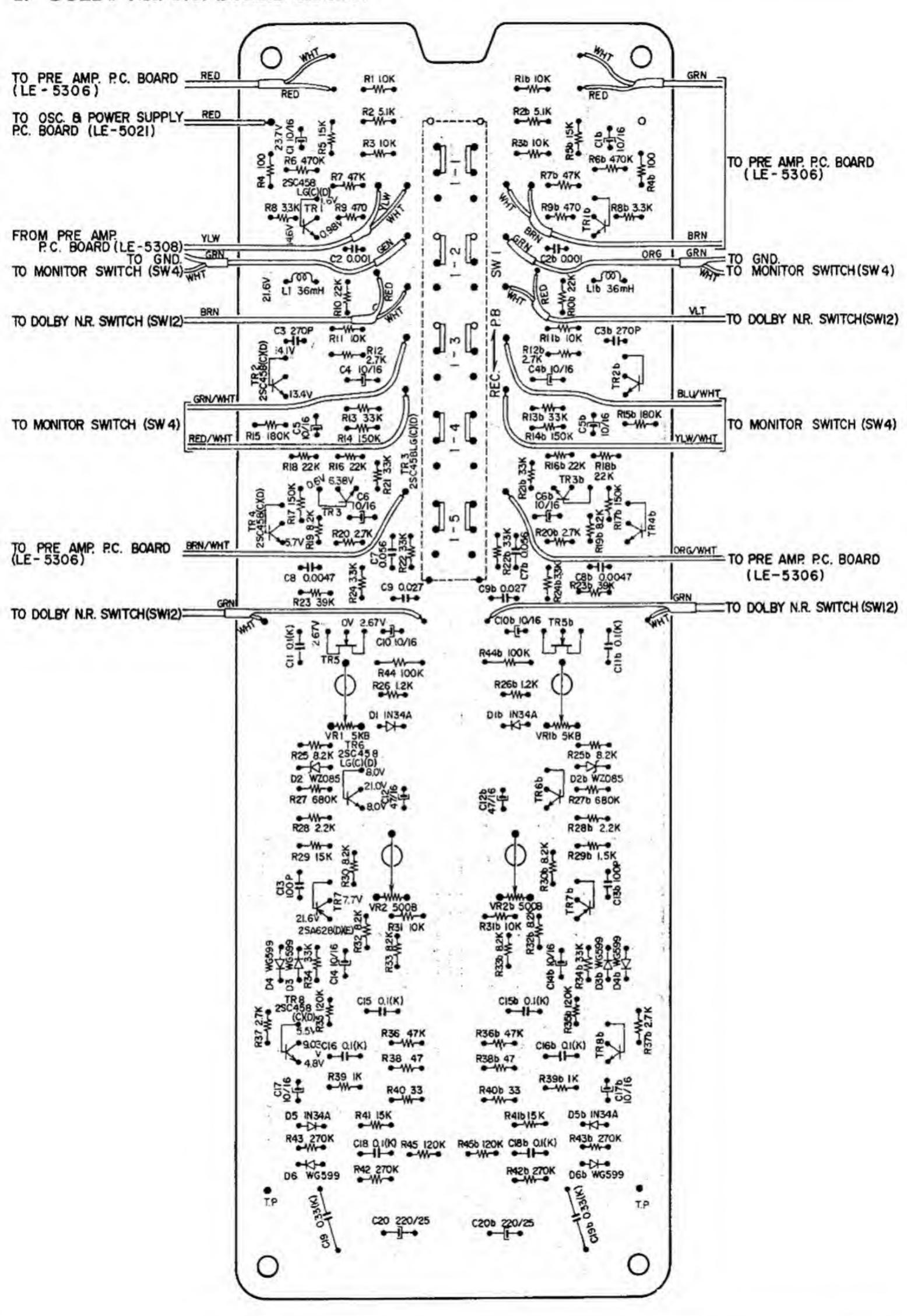
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X. COMPOSITE VIEWS OF COMPONENTS

1. PRE AMP. P.C. BOARD LE-5306

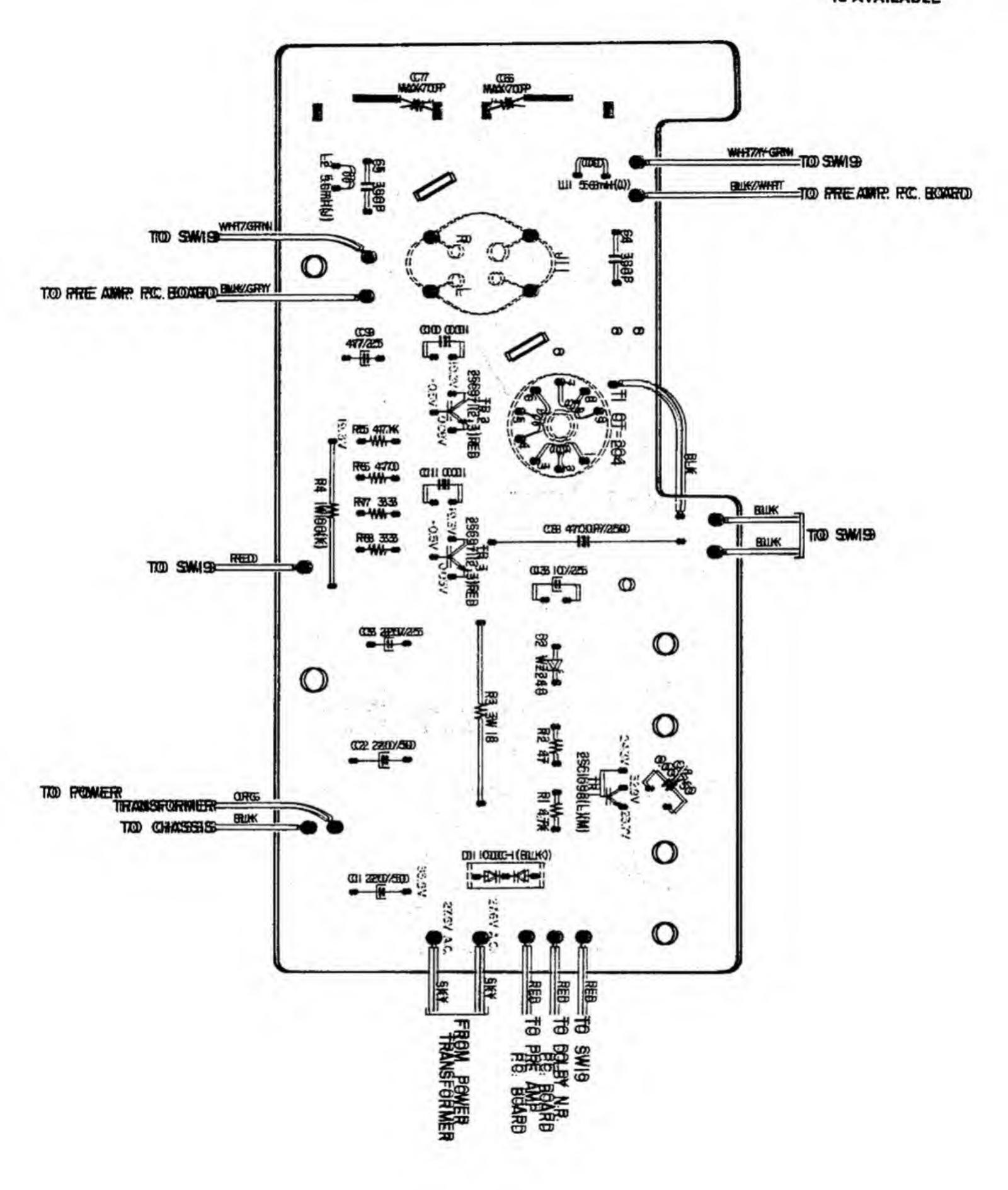


2. DOLBY NR. P.C. BOARD LE-5307



3. OSC. & FOWER SUFFLY P.C. BOARD LE-5021

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SECTION 2

PARTS LIST

TABLE OF CONTENIS

HEG. II	##E/AID BLOCK
FIG. 2	REEL TABLE BLOCK
FIG. 3	MOTOR BLOCK
FIG. 4	FLYWEIEEL/BELT CHANGE LEVER BLOCK 34
FIG. 5	SWITCH BLOCK
FIG. 6	MECH. ASSEMBLY BLOCK
FIG. 7	PRE-AMP. P.C. BOARD ((LE-5306)) BLOCK
FIG. 8	OSC. POWER SUPPLY P.C. BOARD (LE-5021)
	BLOCK 39
FIG. 9	DOLIBY P.C. BOARD ((LE-5307)) BLOCK
FIG. 10	ANP. ASSEMBLY BLOCK 402
FIG. III	FINAL ASSEMBLY BLOCK

HOW TO USE THIS PARTS LIST

- 1. This parts list is compiled by various individual blocks based on assembly process.
- 2. When ordering parts, please describe parts number, serial number, and model number in detail.
- 3. How to read List

12-119

The reference number corresponds with illustration or photo number of that particular parts list. This number corresponds with the Figure Number. This number corresponds with the individual parts index number in that figure. A small "x" indicates the inability to show that particular part 12-115x in the Photo or Illustration. Schematic Diagram Number of individual manufactured part. (not required for parts order) Quantity of particular part required. Ref. Schematic Q'ty Description Parts No. No. FLYWHEEL BLOCK #13

FLYWHEEL BLOCK #13

12-115x 800425 Flywheel Block Assy. Comp. RDG #13 1

12-116 244506 Flywheel Only RD-233 1

12-117x 244754 Felt, Flywheel RD-275 1

12-118 251324 Main Metal Case RD-236 1

253080 Main Metal

4. The symbol numbers shown on the P.C. Board list can be matched with the Composite Views of Components of the Schematic Diagram or Service Manual.

RD-237

- 5. The indications of Resistors and Capacitors in the photos of P.C. Board are being eliminated.
- 6. The shape of the parts and parts name, etc. can be confirmed by comparing them with the parts shown on the Electrical Parts Table of P.C. Board.
- 7. Both the kind of part and installation position can be determined by the Parts Number. To determine where a parts number is listed, utilize Parts Index at end of Parts List.

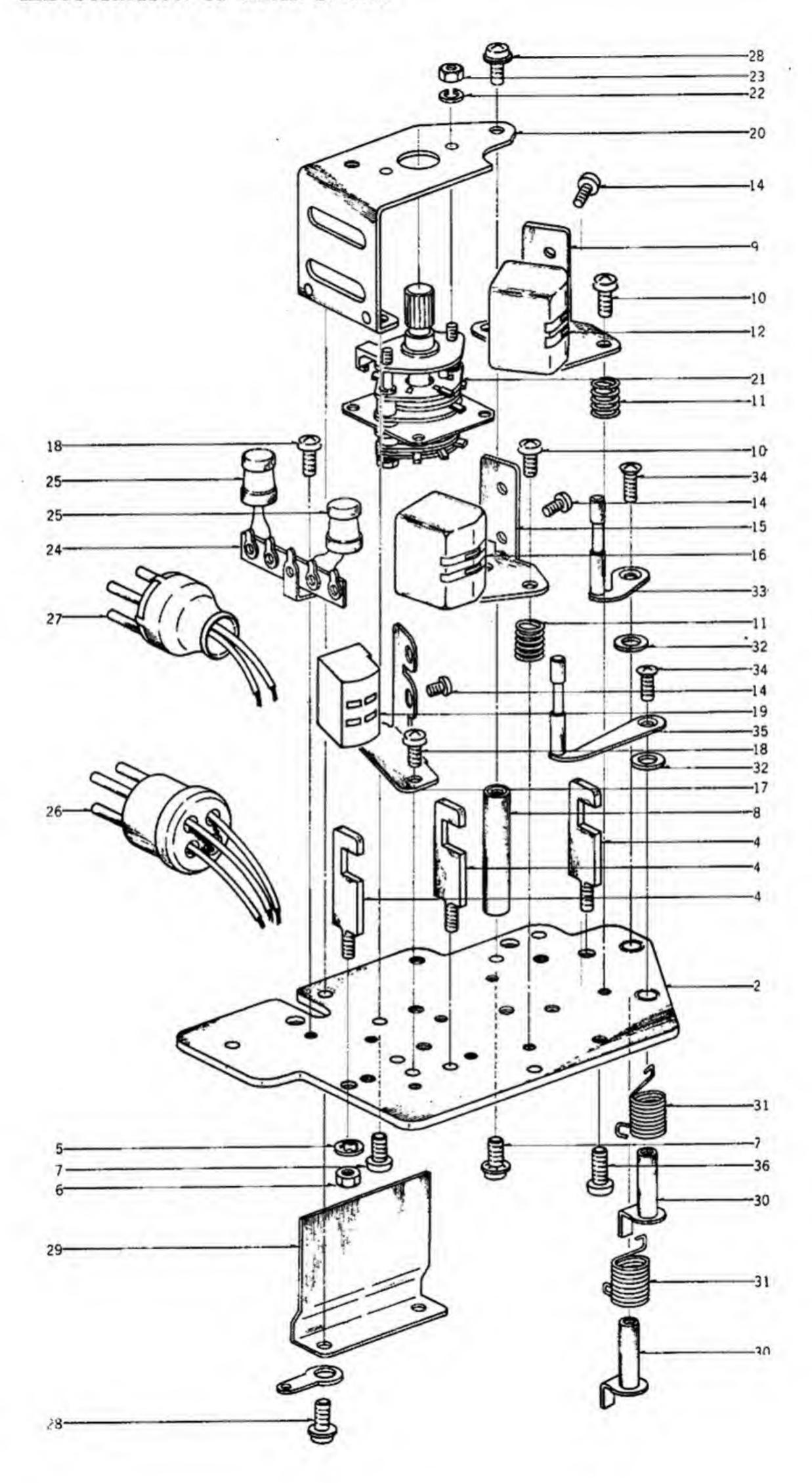
It is necessary first of all to find the Parts Number. This can be accomplished by using the Reference Number listed at right of parts number in the Parts Index. (meaning of ref. no. outlined in Item 3 above).

8. Utilize separate "Price List for Parts" to determine unit price. The most simple method of finding parts Price is to utilize the reference number.

ELECTRICAL PARTS TABLE



FIG. 1 ILLUSTRATION OF HEAD BLOCK



HEAD BLOCK

Ref.	Parts No.	Description	Schmatic (Q'ty	
1-1x	BH480363	Head Block Comp.	LE-3	1	
1-2	HZ490296	Head Base, B, (New LD),			
		w/metal	LD-11	1	
1-3x	MH605856	Head Cover Prop B	LE-0007	2	
1-4	HZ274162	Tape Guide #1	4TR-5	3	
1-5	ZW273802	Toothed Lock Washer M3		3	
1-6	ZW516611	Nut M3		3	
1-7	ZS322626	ISO Screw, binding head 3x8,			
		w/washer		2	
1-8	MH312827	SW. Prop (New LD)	LD-13	1	
1-9	HZ480420	PB. Angle Base	LE-0001	1	
1-10	ZS464714	Screw, round head 3x12		3	
1-11	ZG206144	Angle Adjust Spring	RD-16	6	
1-12	HP375131	REC./PB. HEAD P4-150		1	
1-13x	HZ393974	I-MK Head Terminal Plate	RC-89	2	
1-14	ZS201475	Screw, pan head 2x3	XX.	6	
1-15	HZ480431	Rec. Angle Table	LE-0002	1	
1-16	HP475446	REC. HEAD P4-154		1	
1-17	HZ480442	Erase Head Base	LE-0003	1	
1-18	ZS323728	Screw, binding head 3x5		3	
1-19	HE384693	ERASE HEAD E4-200		1	
1-20	HZ312895	SW. Table (New LD)	LD-12	1	
1-21	ES257668	Rotary SW. ESR-E263L14AS	25-6-3	-1	
1-22	ZW273723	Spring Washer M2		2	
1-23	ZW273734	Nut M2		2	
1-24	EJ255115	Lug Plate VB2L2	33-4-3	1	
1-25	EO390622	Ferri Inductor PL9H 220µH			
		(K)	23-1-4	2	
1-26	EJ297843	Plug 4P, w/cap	42-1-3	1	
1-27	EJ276963	Plug 4P (T Type)	42-1-16	1	
1-28	ZS349288	ISO Screw, binding head 3x5,			
		w/washer		1	
1-29	HZ480475	Head Shield	LE-0004	1	
1-30	HL223503	Shift Lever B, w/shaft A	M9-3	2	
1-31	ZG312928	Shifter Spring	LD-19	2	
1-32	ZW336846	Washer (SPC) D4.1x7x1.2t		2	
1-33	HL312941	Shift Lever, w/pin	LD-15	1	
1-34	ZS480622	Screw, oval countersunk head			
		2.3x6		2	
1-35	HL223536	Shift Lever C, w/pin	M9-5	1	
1-36	ZS379405	ISO Screw, binding head 3x6		1	

REEL TABLE BLOCK

	Ref.	Parts No.	Description	Schmatic No.	Q'ty
	2-1 x	BR 589206	Supply Reel Table Block		
	2-2	BR589217	Comp. Take-up Reel Table Block	LE-3	1
			Comp.	LE-3	1
	2-3	MT368684	Reel Table Disk A, w/shaft A	XR-101	2
	2-4x	MT252112	Friction Cloth B	900-225	2
	2-5	MT317463	Reel Table Rubber, MR	MR-250	2
	2-6	MS255600	Reel Shaft B	XR-103	2
	2-7	MT516565	'O' Ring	3R-139	2
	2-8	MT255420		3R-102	2
	2-9	ZG255633	Reel Spring	3R-109	2
	2-10	MT255565	Reel Shaft Ring	XR-177	2
	2-11	ZW270088		6-1-9	2
	2-12	MR251460		900-222	1
	2-13	MT222366		900-234	i
	2-14	ZG227553	Spring G-2(L)	900-230	i
	2-15	ZW260021	Washer (SUP) D6.1x10x0.13t	200 200	6
	2-16	ZW260054	Washer (SUP) D6.1x10x0.25t		5
	2-17x		Washer (SUP) D6.1x10x0.35t		6
	2-18x		Washer (SUP) D6.1x10x0.5t		
	2-19	MT255870		900-237	5
	2-20x		Friction Cloth A	900-224	4
	2-21	MR252066		900-224	2
	2-22	MT255971	Reel Table Spring Plate A		1
	2-23	MT438647	Reel Torque Adjust Thrust 7	900-227	
	2-24	MT438636	D6.2x13x0.5t Reel Torque Adjust Thrust 6	101022	2
		Was and a	D6.2x13x1t	101021	3
	2-25	MT438592	Reel Torque Adjust Thrust 2 D6.1x10x0.3t	101017	2
	2-26	MT438603	Reel Torque Adjust Thrust 3 D6.1x10x0.5t	101018	2
	2-27x	MT438625	Reel Torque Adjust Thrust 5	2224	
	2002		D6.1x10x1t	101020	3
	2-28	ZW231693	Thrust Washer, w/claw	900-235	2
	2-29	MT292386	Reel Metal Mt. Parts, XR,		
	100	CAR TAKET	w/metal B	XR-191 '	2
	2-30	ZW437804	Flywheel Thrust A D7.9x13x1t	101024	1
	2-31	MT255993	Reel Table Spring Plate C	M8-207	1
Ň	2-32	ZW588306	Washer D6.1x10x0.35t		1
Ý	2-33	MH270000	Retaining Pin D4	900-257	1
-	2-34	MR256094	Reel Table Pulley (Counter)	900-239	1
0.7	2-35	ZS434171	Set Screw, hexagon socket 4x7 (cup/p)		
. 9	2-36	MR252044	Take-up Roller A	900-218	1
	2-37x	ZG227542	Spring G-2 (R)	235 Ta	
	2-38	MR252055	Take-up Roller B	900-230	1
	2-39x	MT255982	- L	900-219	1
	2-40x	MT438581	Reel Table Spring Plate B	300-220	
•	2-4 UX	M1430301	Reel Torque Adjust Thrust 1 D5.8x10.3x1t	101016	1
	2-41	MT438614	Reel Torque Adjust Thrust 4		
	2-42	ZW312693	'E' Ring 4M	101019 6-1-4	1
и	2-43	ZG414077	Spring F-4	73,730,737	1
М	2-44	MT440313		CD-67	1
	2-45	MT228598	Nylon Tube 19M	CD-66	1
			Set Sleeve B	CD-00	1
	2-46	ZS434160	Set Screw, hexagon socket 3x3		

FIG. 2 ILLUSTRATION OF REEL TABLE BLOCK

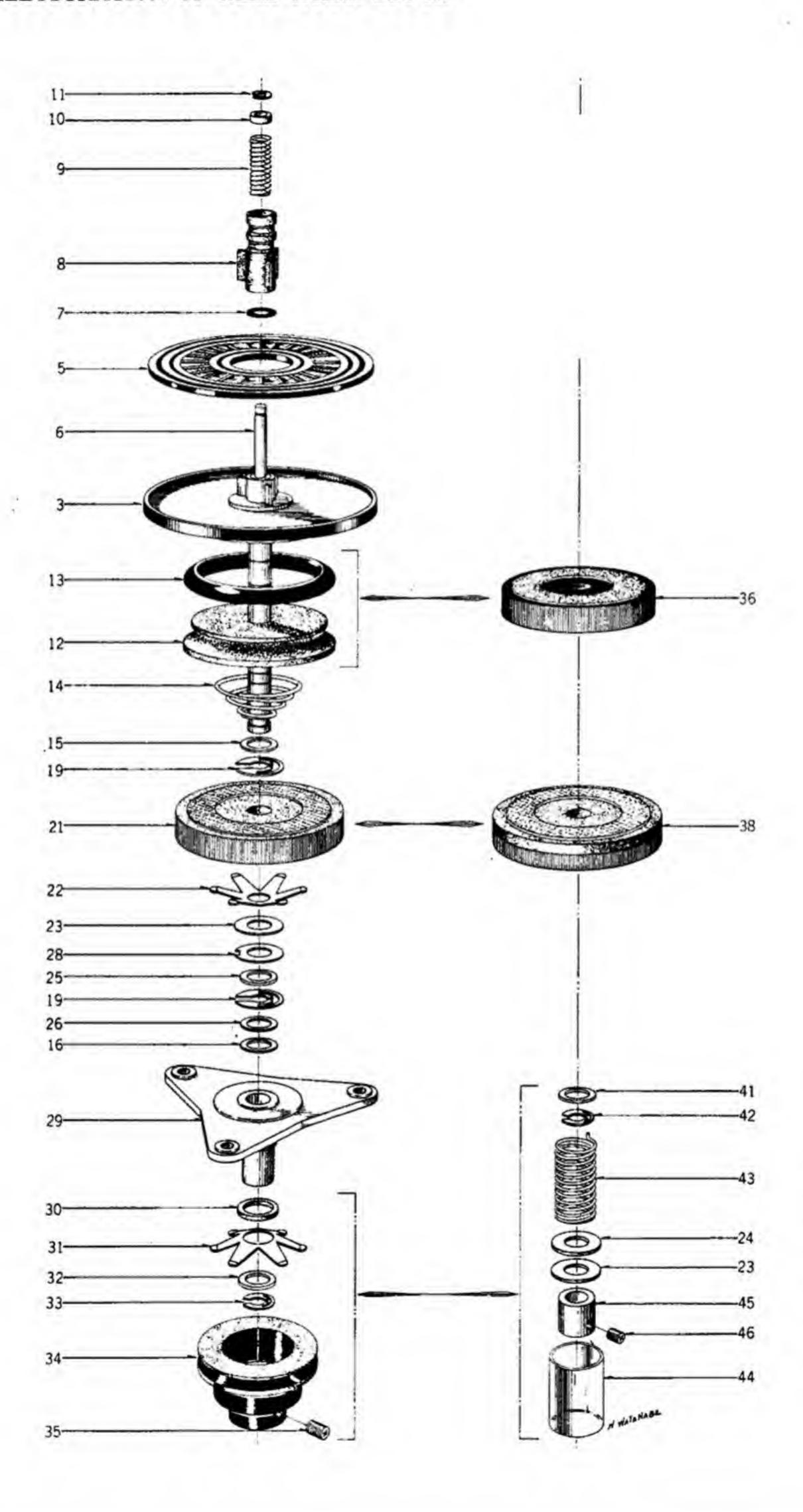
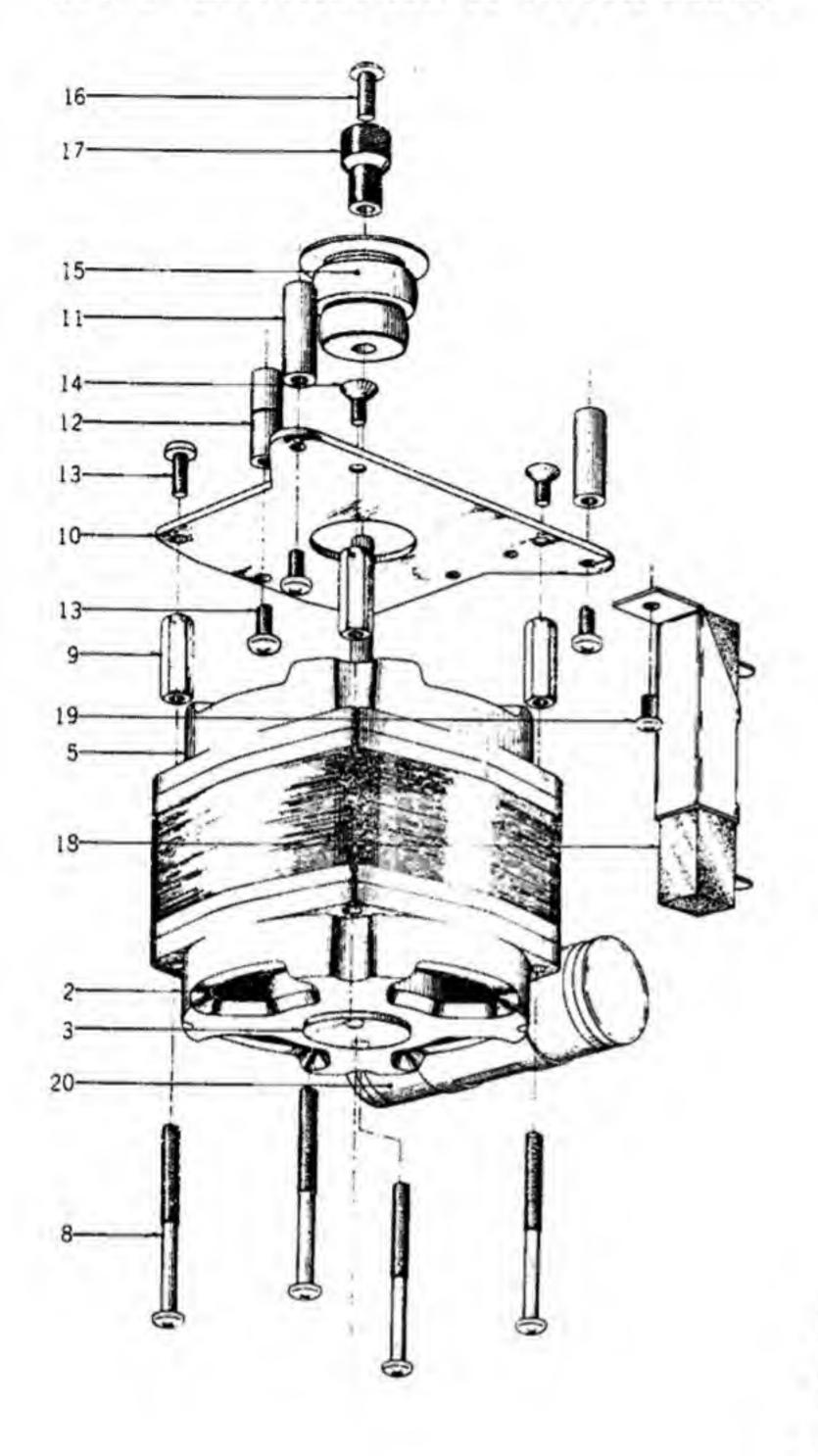


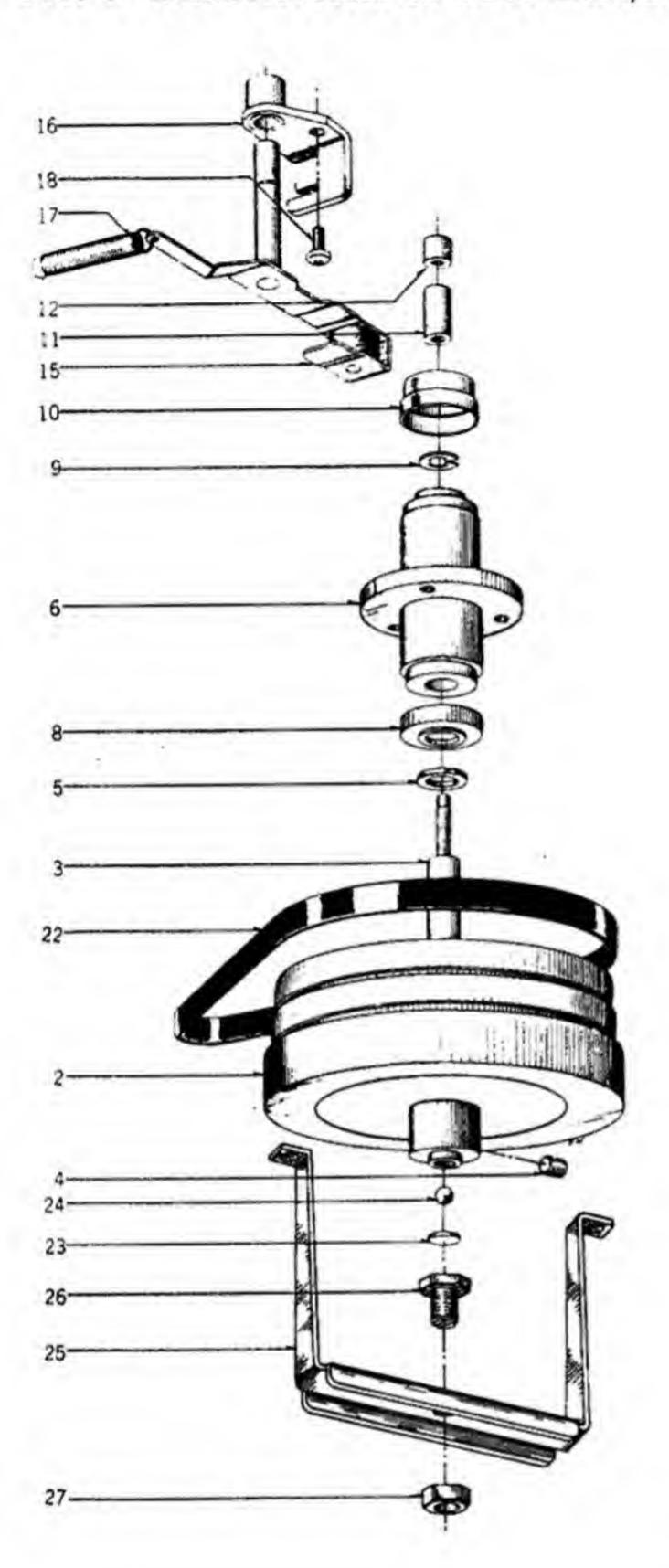
FIG. 3 ILLUSTRATION OF MOTOR BLOCK



MOTOR BLOCK

Ref. No.	Parts No.	Description	Schmatic No.	Q'ty
3-1x	BM601020	Motor Block Comp.	LE-3	1
3-2	MZ395144	Motor Cover B (900), w/metal	900-709	1
3-3	UC254250	Motor Bottom Plate	900-721	1
3-4x	ZS384131	Screw, round head 3x5		2
3-5	MZ395166	Motor Cover A(900), w/metal	900-707	1
3-6x	MZ253956	Motor Oil Cap D	900-725	1
3-7x	EZ335204	Felt C D14x19x4t	900-744	1
3-8	ZS427037	Screw, pan head 4x50,	972.1.53	
		w/washer		4
3-9	ZW254621	Motor Hexagon Nut	900-737	4
3-10	MZ254351	Motor Mt. Plate A	900-738	1
3-11	MH254160	Motor Prop A	24X-730	2
3-12	MH254182	Motor Prop B	24X-731	1
3-13	ZS424056	Screw, pan head 4x10		7
3-14	ZS427026	Screw, countersunk head 4x10		2
3-15	MR254496	Motor Pulley	SRA-5	1
3-16	ZS600816	Screw, truss head 4x8		1
3-17	MR300644	Knurling Pulley (900 Type)	900-735	1
3-18	ER339805	Cement/R. H20B 450Ω(K)	35-16-16	1
3-19	ZS349288	ISO Screw, binding head 3x5,		
		w/washer		3
3-20	EC410016	MP/C. 2+0.5µF 300V AC		
3-21x	EC493525	(Lug Type Uni/D.) (CEE) MP/C. 2µF 250V AC	24-9-13	1
DOC BY		(Lug Type Op/D.) (CSA)	24-9-65	1

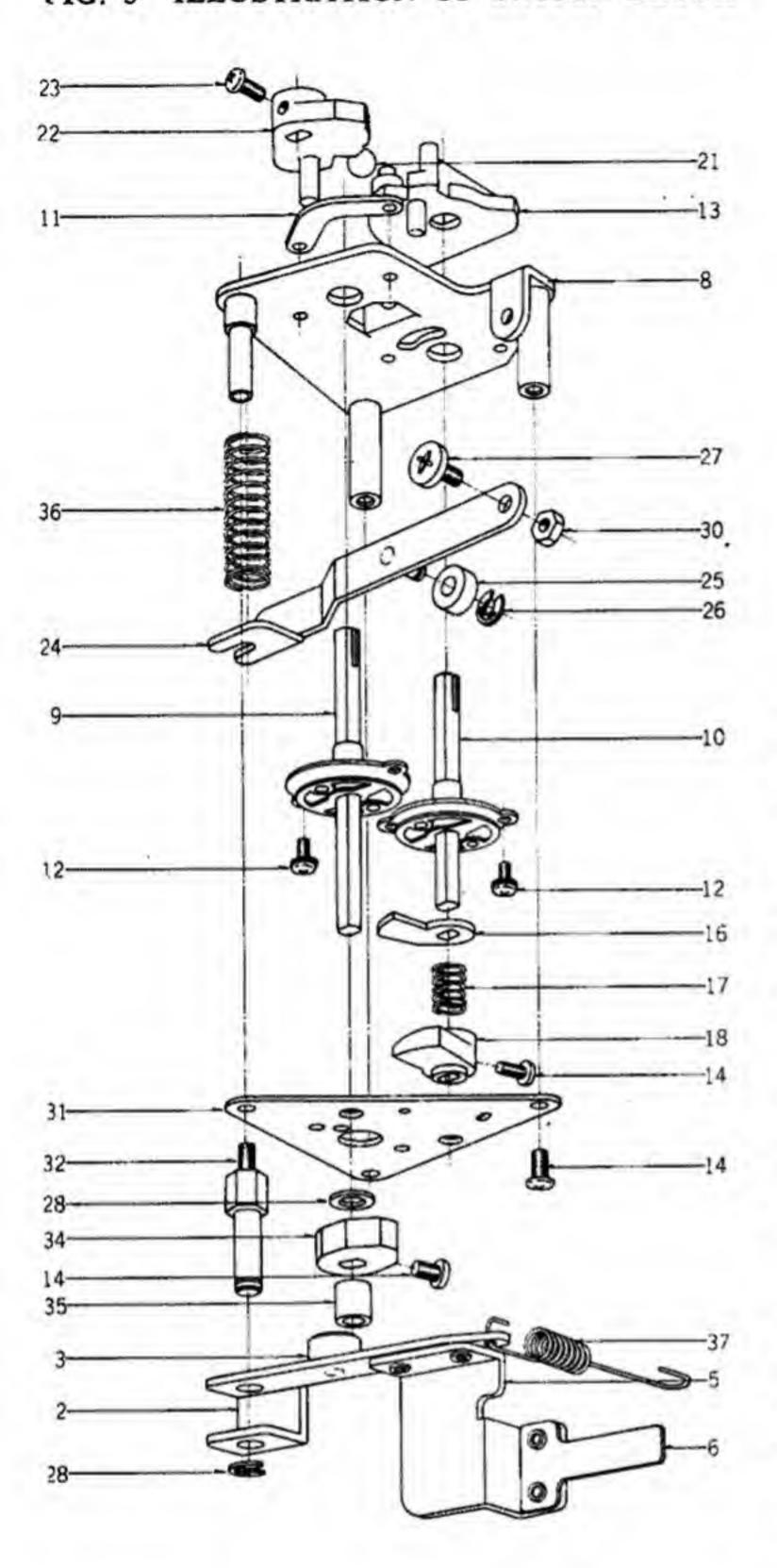
FIG. 4 ILLUSTRATION OF FLYWHEEL/BELT CHANGE LEVER BLOCK



FLYWHEEL/BELT CHANGE LEVER BLOCK

Ref. No.	Parts No.	Description	Schmatic Q	'ty
	FLYWHEE	L BLOCK		
4-1x	BF205075	Flywheel Block Comp.	LE-3	1
4-2	MI244473	Flywheel	707-5-10	1
4-3	MS244708	Flywheel Shaft	SRA-21	1
4-4	ZS373577	Set Screw, hexagon socket		
		5x6 (Flat/p.)		2
4-5	ZW447208	Flywheel Thrust B		
		D7 9x13x0.5t	101025	1
4-6	MZ296267	Main Case B 24 Comp.	1630-205	1
4-7x	MZ586798	Main Case Felt	A0415	1
4-8	MZ446635	Thrust Cap, Main Metal B2	LE-2006	1
4-9	MH244710	Flywheel Fixing Pin	900-250	1
4-10	MZ253113	Main Metal Cap B	MH-208	1
4-11	MY270055	Capstan D8	SRA-7	1
4-12	ZS293027	Capstan Screw, 1100	SRA-6B	1
4-13x	ZW252977	Main Shaft Collar	SRA-32	1
	BELT CHAI	NGE LEVER BLOCK		
4-14x				
		Comp.	LE-3	1
4-15	ML217462	Belt Change Lever B (Small),		
		w/roller B	AT-25	1
4-16	MZ248354	Belt Guide Stop, w/metal	4TR-221	1
4-17	ZG465478	Brake Lever Spring	KD-1092	1
4-18	ZS417150	Screw, pan head 4x6		1
4-19x	ZG217394	Belt Change Spring B	MH-125	1
4-20x	ZW260054	Washer (SUP) D6.1x10x0.25t		1
4-21x	ZW290283	'U' Ring 2.85M	6-1-1	1
4-22	MH256601	Double Face Flat Belt D=110	100912	1
4-23	ZW235585	Nylon Plate D8		1
4-24	MV269965	Steel Ball D4		1
4-25	MZ585911	Shaft Supporting Plate	LS-1204	1
4-26	MZ585900	Shaft Support	LS-1203	1
4-27	ZW463410	ISO Nut #3 M5	Old will	1
4-28x	ZS419736	Screw, binding head 4x6		1

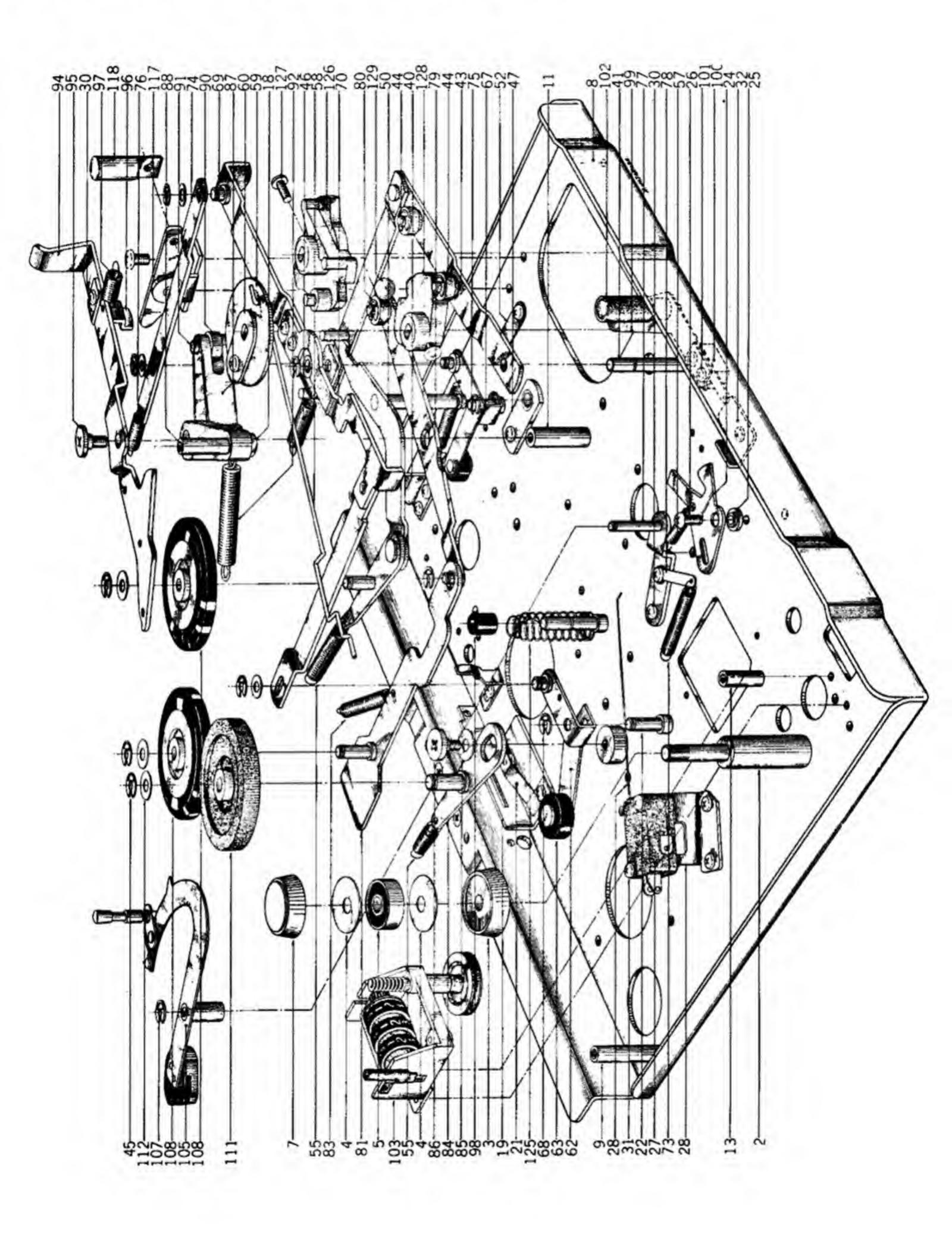
FIG. 5 ILLUSTRATION OF SWITCH BLOCK



SWITCH BLOCK

Ref. No.	Parts No.	Description	Schmatic Q	'ty
	SW. LEVER	BLOCK		
5-1x	BL588701	SW. Lever Block Comp.	LE-3	1
5-2	ML488744	Rec. Lever C, w/shaft B	LE-2002	1
5-3	MR269728	Cam Roller D12.5	RC-126	1
5-4x	ZW290283	'U' Ring 2.85M	6-1-1	1
5-5	ML582355	Switch Lever A, w/lever B	LE-1302	1
5-6	ML582366	Switch Lever B	LE-1303	1
	SW. BLOCK			
	BS480352	SW. Block Comp.	LE-3	1
5-7x		SW. Table A-2 (SX), w/props	MR-201	1
5-8	MZ316901	Rewind Shaft (Y Type)	25-8-5	1
5-9	ES316934	Rewind Shaft (RCC-Y Type)	RCC-202	i
5-10	ES369865		MR-245	2
5-11	MZ316945	Nut Plate	MIN-243	-
5-12	ZS413728	Screw, binding head 3x6, w/washer		4
5-13	MZ316956		MR-242	1
5-14	ZS413201	Screw, pan head 4x8	14	5
	ZW260133	Washer (Fiber) D6.1x10x1t		2
5-15x		Cam Trap Plate B	SX-201	1
5-16	MZ327341	Spring K	900-214	i
5-17	ZG227586	Cam C-2	SX202	i
5-18	MZ327352		SALUE	•
5-19x	ZW434215	Washer (Nylon) D6.1x10.3x0.3t		1
5-20x	ZW434193	Washer (Nylon)		
		D6.1x10.3x0.5t		1
5-21	MV270066	Steel Ball D8	3000 000	1
5-22	MZ217293	Cam B-2 (Without Tap)	1630-201	1
5-23	ZS416687	Screw, binding head 4x8	Lot of L	1
5-24	ML257128	Lever I, w/shaft B	900-209	1
5-25	MR217203	Cam Roller A (Nylon) D12	900-153	1
5-26	ZW290283	'U' Ring 2.85M	6-1-1	2
5-27	ZS217877	Pause Lever Set Screw	900-136	1
5-28	ZW432347	Washer (Luminar) D6.2x13x0.125t		1
	ZW273892	Toothed Lock Washer M4		1
5-29x	ZW273960	Nut M4		1
5-30			M9-308	
5-31	요. (하지 않게 하고 하고 10 요.)	SW. Table B-2	M9-303	i
5-32		Rec. Lever Prop	143-303	1
5-33x		Washer (Nylon) D6.1x10x1t	MD-042	1
5-34	MZ317068	Amp. SW. Cam B	MR-243	•
5-35	MZ610457	Pause Lever Cushion	LE-1005	1
5-36	ZG227485	Spring E	900-119	1
5-37	SZ493042	Rec. Wire B	LE-6028	1
			1000000	

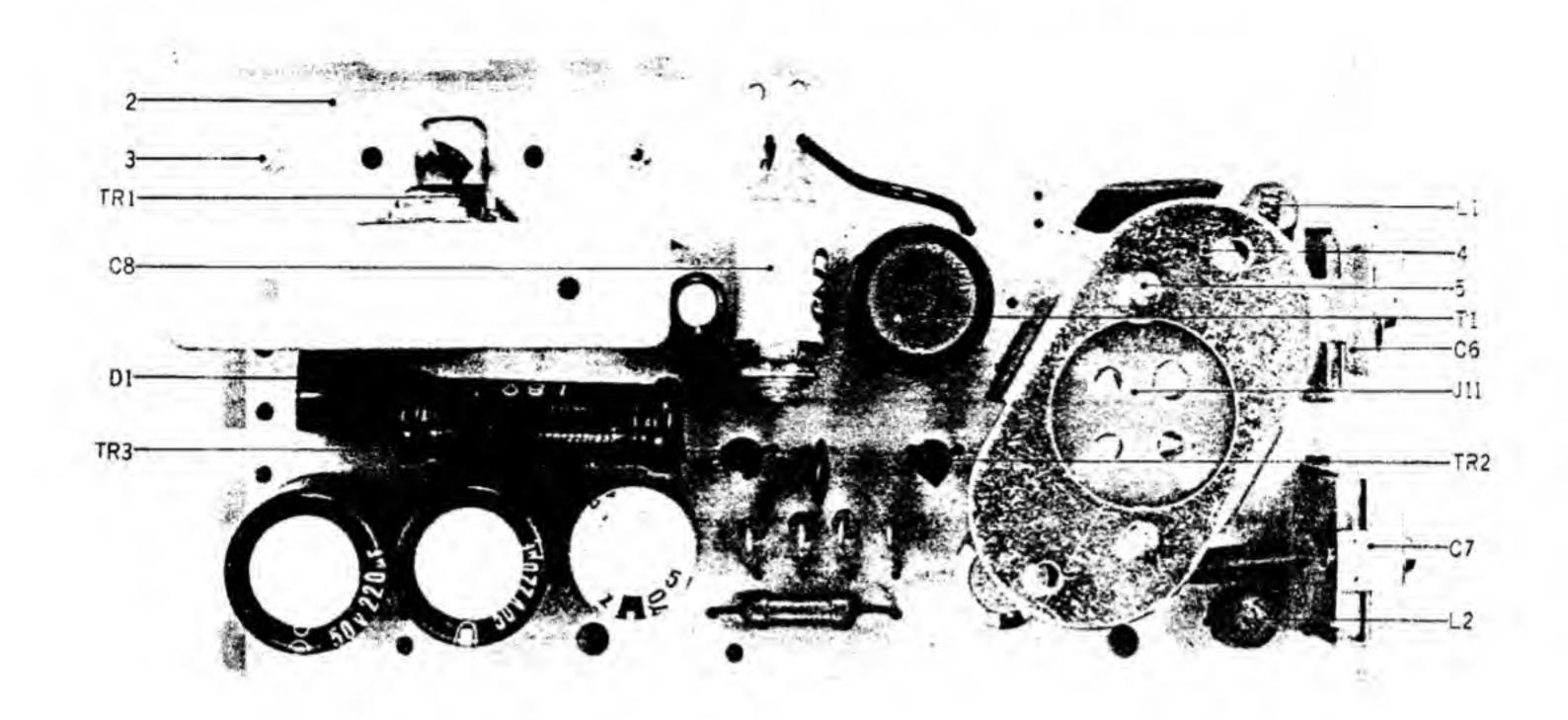
FIG. 6 ILLUSTRATION OF MECH. ASSEMBLY BLOCK



					Ref. No.	Parts No.	Description	Schmatic Q	'ty
					6-62	ML217934	Supply Brake, w/pin	900-113 900-163	1
					6-63	MT245215 ZS245801	Brake Rubber (Large) Brake Roller Retaining Screw		2
MEC	H. ASSEM	IBLY BLOCK			6-64x 6-65x	ZW259942	[300-134	4
Ref.		A	Schmatic (~1			D5.1x10.3x0.5t		3
No.	Parts No.	Description	No.	2'ty	6-66x	ZW260133	:	2.7-12-2	3
	TAPE GUII	DE DI OCK			6-67	ML251932	- 0.544 M. 4 (10. 15. U. 10. 14. 14. 14. 14. 14. 14. 14. 14. 14. 14	900-114	1
614					6-68	ZW290283		6-1-1	2
6-1x 6-2	BZ400948 MH204311	- [일본경하다 1일본경기 기계	AT-16	1	6-69	ML607004		LE-1004	1
6-3	SZ465377	Tape Guide Trop #1700	LC-618	1	6-70	ML548280		LF-1013	1
6-4	ZW231805		3A-356	2	6-71x	ZS201767	Screw, pan head 4x6,		-
6-5	MV248117	**************************************	011 000	1	6 720	ZW259918	Washer (SUP)		2
6-6x	ZW274048	Nut M5		1	6-72x	ZW239910	D5.1x10.3x0.25t		4
6-7	SZ465388	Tape Guide Table B	LC-619	1	6-73	ZG290384	UN Spring D	1630-108	1
		of control of the second of			6-74	ML256983	Lever C2	900-104	1
					6-75	ZG227452	Spring D	900-118	.1
	MECH. ASS	SEMBLY BLOCK			6-76	ZG227441	Spring C	900-117	1
6-8	MZ271776	Mech. Frame (LD), w/bush	LD-101	1	6-77	MZ260662	AS Lever Prop Base, w/prop	4TR-236	1
6-9	MH273295	Mech. Panel Prop, M-9	M9-302	4	6-78	ZW273767	Earth Lug D3x20L		1
6-10x	ZS414033	Screw, countersunk head 3x8	22.27.20	4	6-79	ML257040	Lever FA, w/shaft B	900-107	1
6-11	MS257051	Lever FA Shaft	900-127	1	6-80	MR217203	Cam Roller A (Nylon) D12	900-153	1
6-12x	ZW413267		*** ***	1	6-81	ML295727	2-Speed Motor Lever F,		5.0
6-13	HZ247511	Head Prop C	900-142	3	255	Linduction	w/shaft	M8-107	1
6-14x	ZS413201	Screw, pan head 4x8		2	6-82x	ZW260087	Washer (Fiber) D6.1x10x0.5t		2
6-15x	ZS414044	Screw, countersunk head 4x8	LF-1009	1	6-83	ZG270358	F.B. Pull Spring	M8-108	1
6-16x	MH410938		4TR-109		6-84		Lever K, w/shaft	900-111	1
6-17x	MH248343		4117-103	2	6-85	ZW432347	Washer (Luminar) D6.2x13x0.125t		2
6-18	ZW413188 MZ257073	Lever FB Guide Base	M9-103	,	6-86	ZS223233	Fulcrum Screw A	900-135	1
6-20x	ZS417150	Screw, pan head 4x6		2	6-87	ML243540		900-161	1
6-21	ZG257095	Lever FB Vibration Proof		150	6-88	MS243404	Pinch Roller Shaft C	4TR-102	1
0.21	2025.070	Spring	M8-104	1	6-89x	ZW259975	Washer (SUP) D5.1x10.3x0.8t		1
6-22	MS245463	Brake Lever Shaft	900-129	2	6-90	MR269763	** (AL APPENDED AND ARTHUR PORT OF A STATE O	900-154	1
6-23x	MS245463	Brake Lever Shaft (CSA)	900-129	1	6-91	MS582906	Cam Roller Shaft A-1	7-3-6	1
6-24	MZ312524	Shifter Cam	LD-106	1	6-92	ZG227417	Spring A	900-115	1
6-25	MZ312535	Shifter Cam Collar	LD-107	1	6-93x	ZW376391	Washer (polyslider)		
6-26	ZS393726	Screw, truss head 3x10		1	1 - 5 - 5 - 1		D6.1x10x0.13t		1
6-27	ES250007	Micro SW. M-8-3 U/L	25-1-6	1	6-94	ML479957	Pause Lever, LE	LE-1001	1
6-28	MZ585887	Actuator B, w/pin lever	LS-1202	1	6-95	ZS217877	Pause Lever Set Screw	900-136	1
6-29x	ZS349288	ISO Screw, binding head			6-96	MZ217855	Pause Stopper	900-169	1
	75303700	3x5, w/washer			6-97	ZG217866	Pause Lever Spring A	900-123	1
6-30	ZS323728 ZS422965	Screw, binding head 3x5 Screw, pan head 3x15		2	6-98	MZ610457	Pause Lever Cushion	LE-1005	1
6-32	MZ606993	. T. 프라이어 사용하는 경우 다른 다른 다른 사용을 보고 있다.	LE-1305	1	6-99	MZ217113		RC-129	
6-33x	ZS422076	Screw, pan head 3x5		1	6-100	ZW217102	Cam Stopper Insulator Washer	900-103	2
6-34x	ER376424	Spark Quencher U/L		13/1	6-101	ZS413245 SB258478	Screw, pan head 4x15 Rec. Button (Red)	900-167	1
4 5015		0.1μ+120Ω 500WV	41-1-36	1	6-103		Counter MP-491-28	9-1-23	i
6-35x	ZW273914	Spring Washer M4		2	6-104x	MB406168	- (14 MM) (17 MAN) (12 M) (14 M) (1	3-3-14	1
6-36x	ZW462835	Washer (PBP) D4.3x11x0.2t		1	6-105	BL204658	AS Lever Block Comp. #2	2.5.60	1
6-37x	ZW462846	Washer (PBP) D4.3x11x0.3t		1	6-106x				1
6-38x	ZW462857	Washer D4.3x11x0.4t		1	6-107	ZW290294	'U' Ring 2.85M	6-1-1B	1
6-39x	ZW462868	Washer D4.3x11x0.5t		1	6-108	MI204423	Idler Wheel Comp. #2		2
6-40	ML475920		900-185	1	6-109x	"하나마다리고 경상 다 .	Washer (Nylon) D6.1x10x0.5t	A.	3
6-41		A Lever Shaft	900-126	1	6-110x	ZW376391	Washer (Polyslider)		
6-42x	ZW273960			1	2 7 7 7		D6.1x10x0.13t	100000000000000000000000000000000000000	3
6-43		Lever B, w/lever D	900-103	1	6-111	MI231423	Middle Wheel, w/metal	900-155	1
6-44		Cam Roller A (Nylon) D12	900-153	2	6-112	ZW260144	그렇게 프로지어 맞아서 여러워 시다른 나는 네이터 얼마나 네트리를 되다.	3A-348	
6-45		'U' Ring 2.85M	6-1-1	15	1. 2. 12. 22. 2. 2. 2.		Pinch Roller #3 D=40	42-1-6	1
6-46	ZG469427	Spring B-1 Metal Mt. Parts, w/metal	LS-2004	•	10.000	EJ317125 MZ396393	TV-Consent-Plug 5P Lock Wire Tie 11M/M	16 1 0	1
6-47 6-48x	MZ253653 ZS413201	Screw, pan head 4x8	900-174	i		RJ205986	Cramp Terminal 2-SD	32-1-8	2
6-49x	ZW413267	Flange Nut M4		1	6-117	ML226258	로 무슨 아이를 하면 없는데 하는 사람들은 함께 있는데	4TR-122	1
6-50	ML270685		900-109	1	6-118	SB485741	Start Button C	MS-1002	1
6-51x	ZS413234	Screw, pan head 4x12		3	6-119x		Screw, round head 3x4	200	2
6-52	MZ217708		900-170	1			Cycle Angle (CEE)	LS-1007	1
6-53x	ZW260054			1	6-121x		(1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1	MH-138	1
6-54x	ZG227485	Spring E	900-119	1	A COLOR	ML308564	그 이 그리그리다면서 여러워 있다면 그렇게 하여 하시기를 모르는데 없다.	MH-137	1
6-55	ZG227575	Spring I	900-121	2	42 YEAR OLD SOL	EJ299823	Mate-N-Lock Cap Housing		
6-56x	MZ256814	Rewind Shaft Spacer	M9-124	2	1000		6P 1-480276-0	52-1-2	1
6-57	ZG208091	Impedance Arm Spring	RD-269	1	6-124x	EJ243191	Pin Contact 60511-1	52-1-1	4
6-58	MZ312748	Shifter Spoke	LD-108	1	6-125	ZG217394	Belt Change Spring B	MH-125	1
6-59	MZ293567	Head Lifter Cam A #1630	1630-104	1	6-126	MZ316956	Cam A-3	MR-242	1
6-60	MZ293578	Head Lifter Cam B #1630	1630-105	1	6-127	ZS413201	Screw, pan head 4x8	2.53.6	1
6-61x	ZS349288	ISO Screw, binding head			6-128		Cam B-2 (without Tap)	1630-201	1
		3x5, w/washer		1	6-129	M V 270066	Steel Ball D8		1

			Citi	all. Briganita	Attended for all AIN	
FIG. 7	PHOTO	OF PRE-AMP. P.C. BOARD	Symbol No.	Parts No.	Description	Q'ty
		(LE-5306) BLOCK		EVENAGOE	Comi Finad Wat Vova + 10 to	
		(LL-3300) BLOCK			Semi-Fixed/Vol. V8K4-1 10 kB	
			7-VR3 7-VR4	EV464220 EV522797	Semi-Fixed/Vol. V8K4-1 50 kB Semi-Fixed/Vol. V8K4-1 20 kB	
4	O O	1230101	1-4164	E + 322191	Semi-Fixed, vol. vok4-1 20 kB	2
					Capacitor, Vertical Type	
*3		TR4	7-C1	EC432810	Elect. 10µF 16WV NL	2
3		1R3	7-C2	EC336104	Elect. 100µF 6.3WV	2
2		VR4	7-C3	EC493323	Elect. 1µF 25WV NL	2
	2 50 2	L2	7-C4, 5	EC336126	Elect. 47µF 25WV	4
	1	102 IC2	7-C6	EC290520	VFM 100PF(J) 50WV	2
		TI TI	7-C7	EC432810	Elect. 10µF 16WV NL	2
		01	7-C8, 9	EC336104	Elect. 100µF 6.3WV	4
		TD5	7-C10	EC368335	Mylar 0.022µF(J) 50WV	2
			7-C11 7-C12	EC446297 EC220994	Mylar 0.18μF(J) 50WV Elect. 10μF 25WV	2
	7		7-C12	EC446297	Mylar 0.18µF(J) 50WV	2
		TIC NO. DIE	7-C14	EC336126	Elect. 47µF 25WV	2
	1		7-C15	EC320051	Elect. 10µF 16WV	2
		TR36	7-C16	EC379157	Mylar 0.033µF(J) 50WV	2
	1	TR4b	7-C17	EC405898	Styrol 470PF(J) 50WV	2
		VR4b	7-C18	EC350684	Elect. 22µF 25WV	2
	300	-20	7-C19	EC451462	VFM 150PF(J) 50WV	2
		- C2b	7-C20	EC336126	Elect. 47µF 25WV	2
	. 2	T1b	7-C21	EC480071		2
	tir J	016	7-C22	EC513990	Styrol 330PF(I) 50WV	2
	1 - 1	TR56	7-C23	EC329771	Elect. 47µF 6.3WV	2
	2007		7-C24	EC290520 EC514708	VFM 100PF(J) 50WV Elect. 4.7μF 25WV NL	2
	14.		7-C25 7-C26	EC329771	Elect. 47µF 6.3WV	2
	(3)	7R1b	7-C27	EC389485	Mylar 0.018µF(J) 50WV	2
	1	R26	7-C28	EC562678	Styrol 750PF(J) 50WV	2
	205	/R3b	7-C29	EC389474	Mylar 0.0015µF(J) 50WV	2
	Sand South		7-C30	EC336126	Elect. 47µF 25WV	2
	and the	The state of the s	7-C31	EC513955	Styrol 220PF(J) 50WV	2
		THE TOTAL STREET	7-C32	EC493323	Elect. 1µF 25WV NL	2
		C1b	7-C33	EC329771	Elect. 47µF 6.3WV	2
			7-C34	EC336104	Elect. 100µF 6.3WV	2
			7-C35		Styrol 220PF(J) 50WV	2
		TRIb	7-C36	EC220994	Elect. 10µF 25WV	2
	1	1.		EC320051	Elect. 10µF 16WV	0
			7-C40	EC290520	VFM 100PF(J) 50WV	2
	10%	-1			Resistor, Stopper Type	
	15 8	TR2	7-R1	ER480060	Carbon RD1/4 33k(J) NL	2
	11-1	C VR2	7-R2		Carbon RD1/4 220k(J)	2
	1	VR3	7-R3	ER306360	Carbon RD1/4 6.8k(J)	2
		VRI VRI	7-R4		Carbon RD1/4 33k(J)	2
	5	and the second s	7-R5	ER211465	Carbon RD1/4 1k(J)	2
	14	T-S: CINCH	7-R6		Carbon RD1/4 5.6k(J)	2
	-11	101	7-R7, 8		Carbon RD1/4 47k(J)	4
	-	E	7-R9		Carbon RD1/4 4.7k(J)	2
			7-R10		Carbon RD1/4 220k(J) Carbon RD1/4 18k(J)	2
	-		7-R11 7-R12		Carbon RD1/4 18k(J) Carbon RD1/4 10k(J)	2
	3	TRI	7-R12		Carbon RD1/4 15k(J)	2
	100	W. W. W. W. W.	7-R14		Carbon RD1/4 10k(J)	2
			7-R15		Carbon RD1/4 27k(J)	2
			7-R16		Carbon RD1/4 680(J)	2
			7-R17		Carbon RD1/4 1.2k(J)	2
DDE AN	D DC D	OADD (IE 5206) DIOCK	7-R18		Carbon RD1/4 100(J)	2
FRE-AIV	ir. r.c. B	OARD (LE-5306) BLOCK	7-R19		Carbon RD1/4 36(J)	2
Symbol	Pasta Na	Description Q'ty	7-R20		Carbon RD1/4 150k(J)	2
No.	Parts No.	Description Q'ty	7-R21 7-R22		Carbon RD1/4 10k(J) Carbon RD1/4 330k(J)	2
7-1x	BA588947	Pre-Amp. P.C. Board Comp.	7-R23		Carbon RD1/4 330K(J)	2
	2.1000741	(LE-5306) 1	9.2223		Carbon RD1/4 4.7k(J)	2
7-TR1	ET234854	Transistor 2SC458LG(C) 2	7-R25		Carbon RD1/4 3.3k(J)	2
7-TR2	ET453486	Transistor 2SC711(E) (F) 2	7-R26, 27		Carbon RD1/4 22k(J)	4
7-TR3	ET234854	Transistor 2SC458LG(C) 2	7-R28		Carbon RD1/4 120k(J)	2
7-TR4	ET550754	Transistor 2SC1312(G) 2	7-R29	ER324202	Carbon RD1/4 5.1k(J)	2
7-TR5	ET453486	Transistor 2SC711(E) (F) 2	7-R30		Carbon RD1/4 6.2k(J)	2
7-IC1, 2	E1412413	I.C. Line Amp. LD-3141 4	7-R31		Carbon RD1/4 4.7k(J)	2
7-D1	ED219464	그리아 이 아이지 않아야 한다니. 기계 사람들이 그리고 하는 것이 하는 것이 그리고 있었다.	7-R32		Carbon RD1/4 1k(J)	2
7-L1	E0424866		100000000000000000000000000000000000000		Carbon RD1/4 100k(J)	2
7-L2	EO244001				Carbon R D1/4 36k(J)	2
7-T1 7-VR1	BT517274 EV464196	그 사용하다 하나 사용하는 것이 없다면 하고 있다면 하는 것이 없는데 없었다.	7-R35 7-R36		Carbon RD1/4 4.7k(J) Carbon RD1/4 1.2k(J)	2
,	21404190	Julia Like Julia Long Land	1-1.00	211300043	Caroon North Tian(a)	-

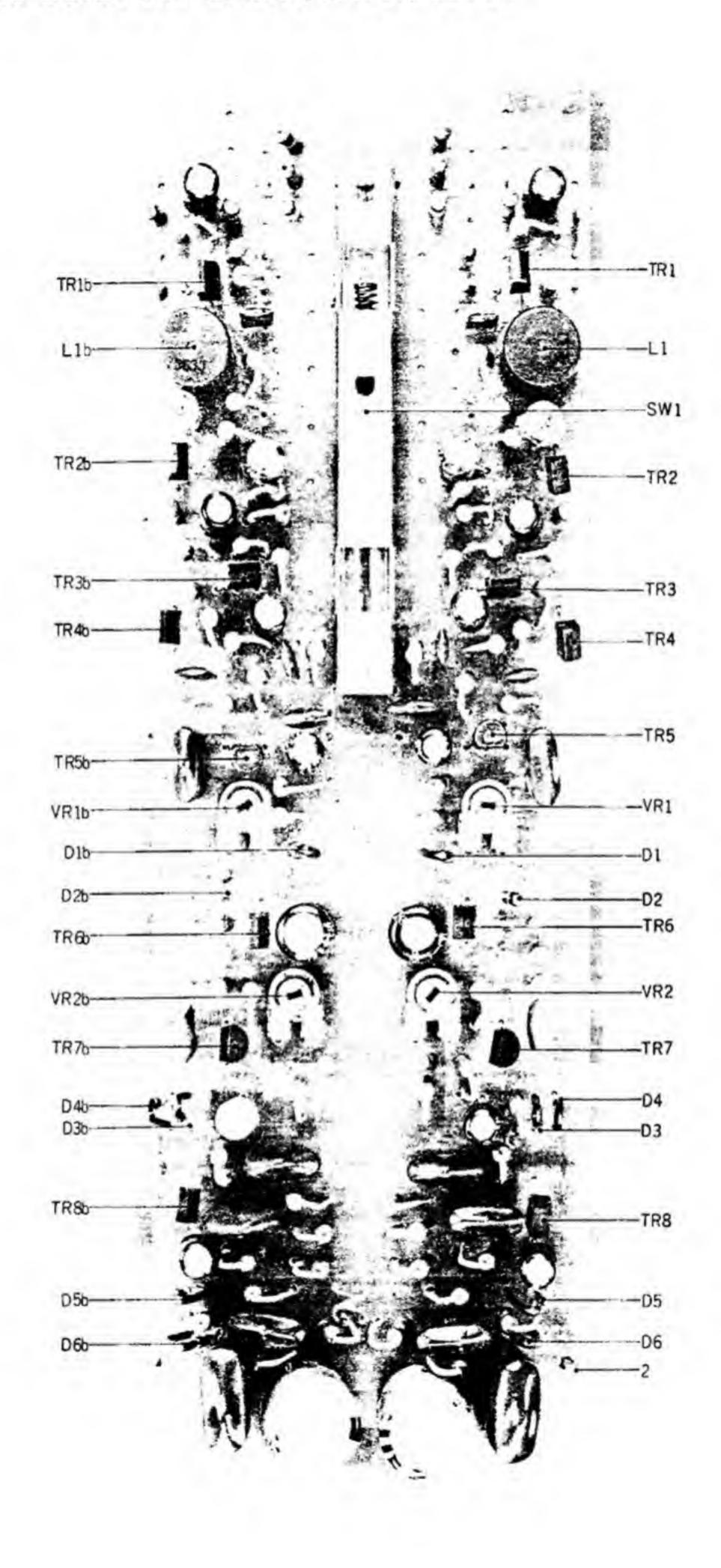
FIG. 8 PHOTO OF OSC. POWER SUPPLY P.C. BOARD (LE-5021) BLOCK



OSC. POWER SUPPLY P.C. BOARD (LE-5021) BLOCK

No.	Parts No.	Description	Q'ty
8-1x	BA480306	Osc. Power Supply P.C. Board	
		Comp. (LE-5021)	1
8-TR1	ET476886	Transistor 2SC1098(L) (M)	1
8-TR2	ET511920	Transistor 2SC1247A(B) (V)	2
8-D1	ED329130	Silicon Diode 10DC-1 (Black)	1
8-D2	ED511918	Zener Diode WZ-240	1
8-T1	EO383365	Osc. Coil OT-204	1
8-L1, 2	EO321254	Ferri Inductor FL7H 5.6MH(J)	2
8-J11	EJ374027	Socket 4P (T Type)	1
8-2	EZ480396	Heat-sink Plate	-1
8-3	ZS379405	ISO Screw, binding head 3x6	3
8-4	EZ480418	Socket Table	1
8-5	ZS325495	Tapping Screw #2 3x6	2
		Capacitor, Vertical Type	
8-C1, 2	EC337533	Elect. 220µF 50WV	2
8-C3	EC336115	Elect. 220µF 25WV	1
8-C4, 5	EC350717	VFM 390PF(J) 50WV	2
8-C6, 7	EC425250	Trimmer A-1P3-3 70PF	2
8-C8	EC520492	Styrol 5600PF(J) 500WV	
		(Tub. Type)	1
8-C9	EC336126	Elect. 47µF 25WV	1
8-C10, 11	EC250841	Mylar 0.01µF(J) 50WV	2
8-C12	EC350875	Mylar 0.001µF(J) 50WV	1
8-C13	EC220994	Elect. 10µF 25WV	1
		Resistor, Stopper Type	
8-R1	ER212883	Carbon RD1/4 4.7k(J)	1
8-R2	ER361642	Carbon RD1/4 47(J)	1
8-R3	ER413717	Wire-wound 3W 18(J) (L Type)	1
8-R4	ER398856	Metal Oxide Film 1W 100(K)	1
8-R5	ER212883	Carbon RD1/4 4.7k(J)	1
8-R6	ER304402	Carbon RD1/4 470(J)	1
8-R7, 8	ER315944	Carbon RD1/4 3.3(J)	2

FIG. 9 PHOTO OF DOLBY P.C. BOARD (LE-5307) BLOCK

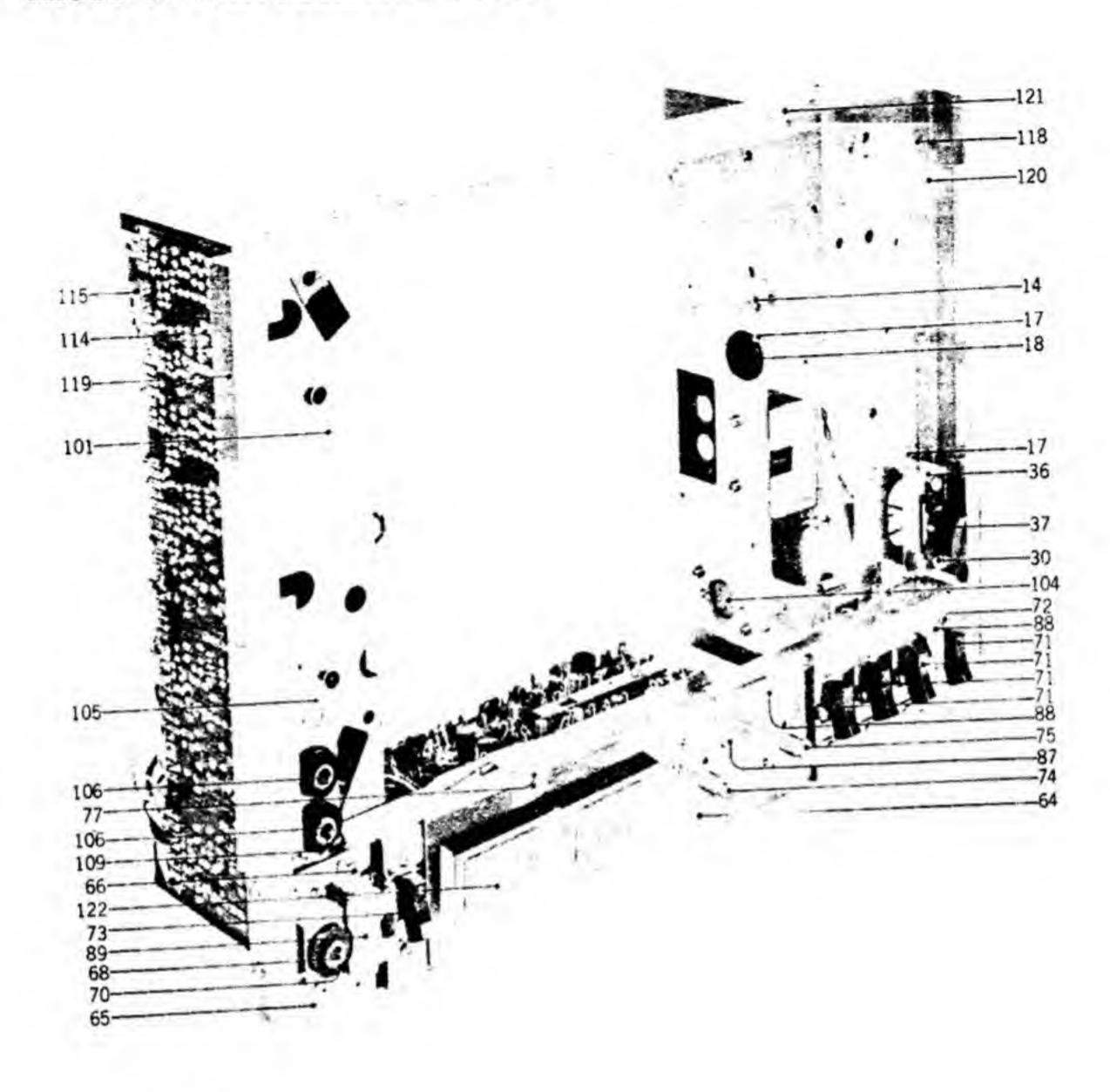


DOLBY P.C. BOARD (LE-5307) BLOCK

DOLBY	P.C. BOA	RD (LE-5307) BLOCK	
Symbol No.	Parts No.	Description	Q'ty
9-1x	BA589127	Dolby P.C. Board Comp. (LE-5307)	1
9-TR1	ET391768	Transistor 2SC458LG(C) (D)	2
9-TR2	ET571781	Transistor 2SC458(C) (D)	2
9-TR3	ET391768	Transistor 2SC458LG(C) (D)	2
9-TR4	ET571781	Transistor 2SC458(C) (D)	2
9-TR5	ET491051	FET 2SK30A (GR)	2
9-TR6	ET391768	Transistor 2SC458LG(C) (D)	2 2
9-TR7	ET538110	Transistor 2SA628(D) (E)	2
9-TR8	ET571781	Transistor 2SC458(C) (D)	2
9-D1	ED219464	Germanium Diode 1N34A Zener Diode WZ-085	2
9-D2	ED491130	Silicon Diode WG-599	4
9-D3, 4	ED514721 ED219464	Germanium Diode 1N34A	2
9-D5 9-D6	ED514721	Silicon Diode WG-599	2
9-SW1	ES588284	Slide SW. CL-210E	1
9-L1	EO496350	Inductor 146LY 36MH(J)	2
9-VR1	EV464207	Semi-Fixed/Vol. V8K4-1 5 kB	2
9-VR2	EV523620	Semi-Fixed/Vol. V8K4-1 500B	2
9-2	EJ350447	Test Terminal	2
		Consider Marking Trees	
9-C1	EC320051	Capacitor, Vertical Type Elect. 10µF 16WV	2
9-C1	EC320051	Mylar 0.001µF(J) 50WV	2
9-C3	EC513988	Styrol 270PF(J) 50WV	2
9-C4 to 6	EC320051	Elect. 10µF 16WV	6
9-C7	EC329883	Mylar 0.0056µF(J) 50WV	2
9-C8	EC337500	Mylar 0.0047µF(J) 50WV	2
9-C9	EC329861	Mylar 0.027µF(J) 50WV	2
9-C10	EC320051	Elect. 10µF 16WV	2
9-C11	EC251291	Mylar 0.1µF(K) 50WV	2
9-C12	EC320040	Elect. 47µF 16WV	2
9-C13	EC290520	VFM 100PF(J) 50WV	2
9-C14	EC320051	Elect. 10µF 16WV	2
9-C15, 16	EC251291	Mylar 0.1µF(K) 50WV	4
9-C17	EC320051	Elect. 10µF 16WV	2 2
9-C18	EC251291	Mylar 0.1µF(K) 50WV Mylar 0.33µF(K) 50WV	2
9-C19 9-C20	EC395504 EC336115	Elect. 220µF 25WV	2
3-020	LCJJUIIJ		
	2000000	Resistor, Stopper Type	
9-R1	ER336442	Carbon RD1/4 10k(J)	2
9-R2	ER324202	Carbon RD1/4 5.1k(J)	2 2
9-R3	ER336442	Carbon RD1/4 10k(J) Carbon RD1/4 100(J)	2
9-R4 9-R5	ER211667 ER306887	Carbon RD1/4 15k(J)	2
9-R6	ER429996	Carbon RD1/4 470k(J)	2
9-R7	ER346601	Carbon RD1/4 47k(J)	2
9-R8	ER212477	Carbon RD1/4 3.3k(J)	2
9-R9	ER304402	Carbon RD1/4 470(J)	2
9-R10	ER212264	Carbon RD1/4 22k(J)	2
9-R11	ER336442	Carbon RD1/4 10k(J)	2
9-R12	ER343078	Carbon RD1/4 2.7k(J)	2
9-R13	ER349907	Carbon RD1/4 33k(J)	2
9-R14	ER357570	Carbon RD1/4 150k(J)	2
9-R15	ER212174	Carbon RD1/4 180k(J)	2 2
9-R16	ER212264	Carbon RD1/4 22k(J)	2
9-R17	ER357570	Carbon RD1/4 150k(J) Carbon RD1/4 22k(J)	2
9-R18	ER212264 ER349942	Carbon RD1/4 8.2k(J)	2
9-R19 9-R20	ER343078	Carbon RD1/4 2.7k(J)	2
9-R21, 22	ER349907		4
9-R23	ER357535	Carbon RD1/4 39k(J)	2
9-R24	ER212477	Carbon RD1/4 3.3k(J)	2
9-R25	ER349942	Carbon RD1/4 8.2k(J)	2
9-R26	ER306843		2
9-R27	ER430097	Carbon RD1/4 680k(J)	2
9-R28	ER357456	Carbon RD1/4 2.2k(J)	2
9-R29	ER306887	Carbon RD1/4 15k(J)	2
9-R30	ER349942	Carbon RD1/4 8.2k(J)	2 2
9-R31	ER336442	- 10 - 10 - 10 - 10 - 10 - 10 - 10 - 10	4
9-R32, 33			2
9-R34 9-R35	ER349907 ER450011	Carbon RD1/4 33k(J) Carbon RD1/4 120k(J)	2
9-R35	ER 346601		2
9-R37	ER343078		2
F (650)		The state of the state of the	

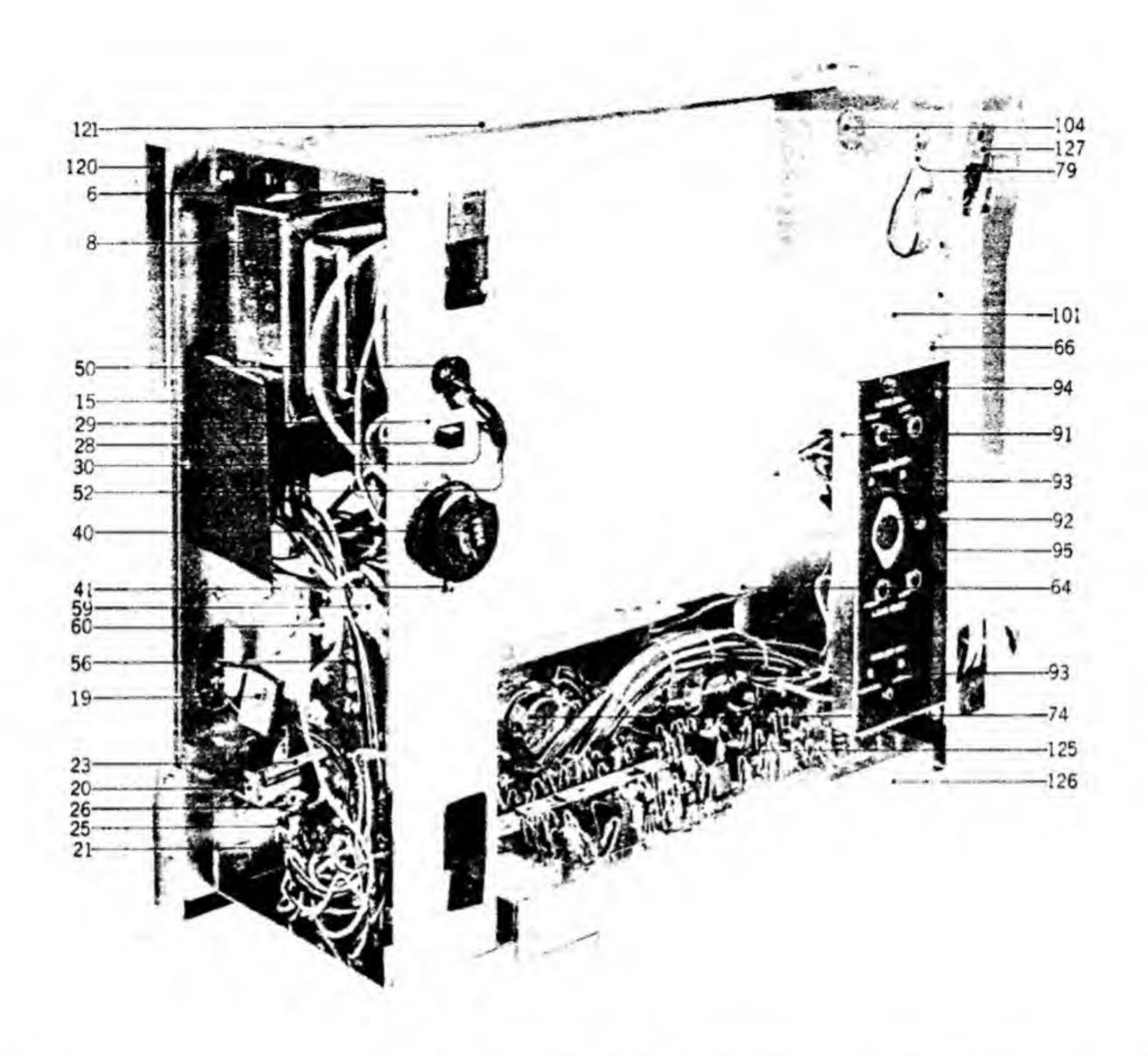
Symbol No.	Parts No.	Description	Q'ty
9-R38	ER361642	Carbon RD1/4 47(J)	2
9-R39	ER211465	Carbon RD1/4 1k(J)	2
9-R40	ER380913	Carbon RD1/4 33(J)	2
9-R41	ER306887	Carbon RD1/4 15k(J)	2
9-R42, 43	ER426857	Carbon RD1/4 270k(J)	4
9-R44	ER450011	Carbon RD1/4 120k(J)	2
9-R45	ER211757	Carbon RD1/4 100k(J)	2

FIG. 10 PHOTO OF AMP. ASSEMBLY BLOCK



AMP.	ASSEMBLY	BLOCK
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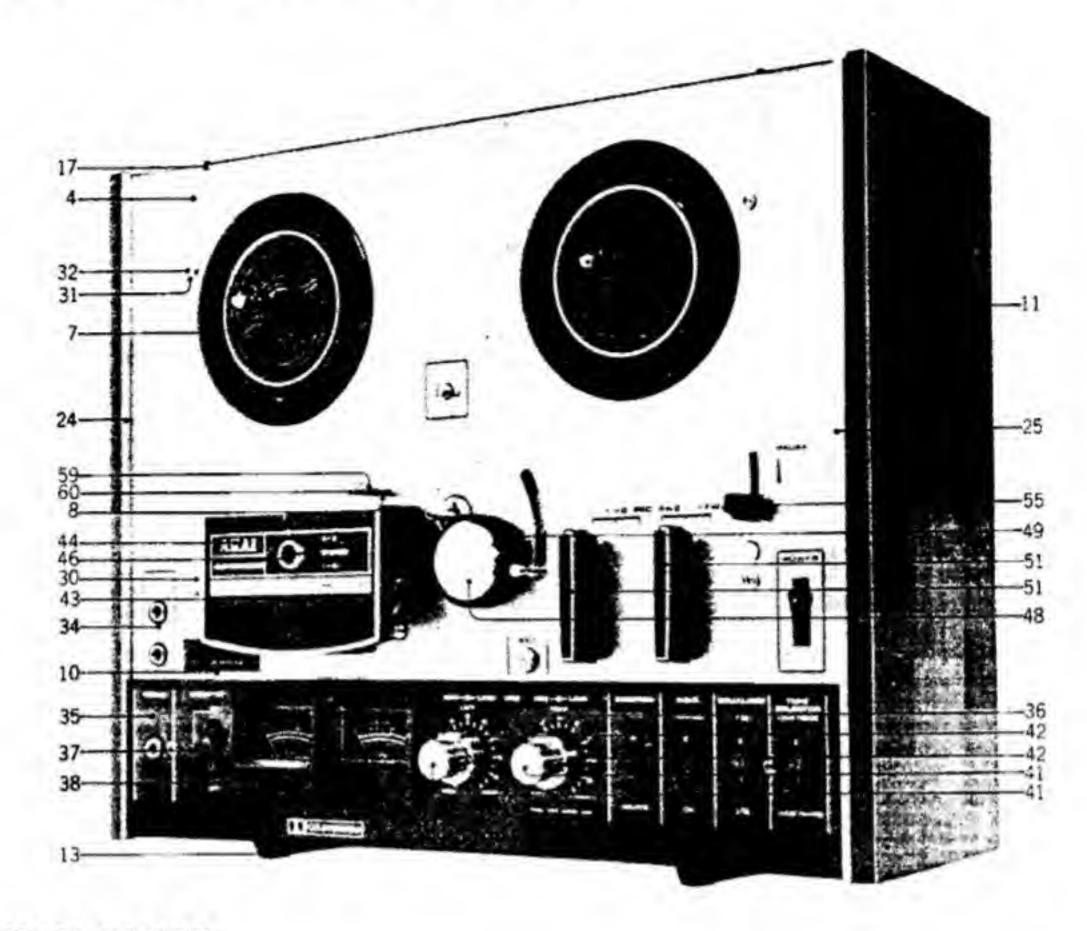
Ref. No.	Parts No.	Y BLOCK Description	Schmatic Q	'ty	Ref. No.	Parts No.	Description	Schmatic Q)'ty
140.	noumn oru	ONLY ED AME DI OCK		- 3	10-20	EZ480824	Rec. SW. Holder	LE-5013	1
		PPLY FRAME BLOCK			10-21	ES317744	Slide SW. SL-242B4V	25-3-28	1
10-1x	BZ588971	Power Supply Frame Block	LE-3	1	10-22x	ZS461935	Screw, round head 2.6x4		2
	STATE STATE OF	Comp.		3	10-23	ZG227428	Spring B	900-116	1
10-2x	BZ588982	Power Supply Frame Block	LE-3	1	10-24x	ZW273756	Nut M3		2
	Tuloto title	Comp. (CSA)	LL J	•	10-25	ML493277	Rec. SW. Return Lever	LE-5036	1
10-3x	BZ588993	Power Supply Frame Block	1 5.2	1	10-26	ZS207314	Amp. Lever Set Screw	3A-737	2
	E-6023-614	Comp. (CEE)	LL-3	•	10-27x	ZS325495	Tapping Screw #2 3x6	3.742	8
10-4x	BZ589004	Power Supply Frame Block	10.0	1	10-28	ES479485	Slide SW. S-1	25-3-66	1
	20013402	Comp. (JPN)	LE-3	•	10-29	SM223817	Name Plate, Frequency		
10-5x	BZ589015	Power Supply Frame Block	10.3	1	140,5		Change	3A-741	1
	22 3 3 3 3 5 5	Comp. (3 core)			10-30	ZS323728	Screw, binding head 3x5		6
10-6	EZ583468	Power Supply Frame D	LE-5009		10-31x	EJ299834	Mate-N-Lock Plug Housing	8.1. 6	
10-7x	EZ494853	Power Supply Frame C	1 F. COO		7,516,50		6P 1-480273-0 (CSA)	52-1-2	1
	E-0.50.000.000	(CSA, CEE)		1	10-32x	EJ229353	Socket Contact 60510-1		
10-8	BT480014	Power Trans. LET-1	38-4-162	1	ATTACK.		(CSA)	52-1-1	2
10-9x	BT480036	Power Trans. LET-3 (CSA)	38-4-160	- 7	10-33x	EZ583817	Mate-N-Lock Table (CSA)	LE-5314	1
10-10x	BT480047	Power Trans. LET-4 (CEE)	38-4-161	î	10-34x	ZW273881	Earth Lug M4		1
10-11x		Power Trans. LET-14 (JPN)	38-4-201		10-35x	ZW273802			1
10-12x	ZS434250	Screw, pan head 4x8,		2	10-36	EZ480846	Power SW. Table	LE-5011	1
	- LEVEL 4044	w/washer		2	10-37	ES480857	Seesaw SW. TV-3, JA-07,		
10-13x		Spring Washer M4		2		44-144-14	w/loose hole	25-2-29	1
10-14	ZW416698	Nut M4	LE-5034	1	10-38x	ES480868	Seesaw SW. JS-07 (JA-04		
10-15	EZ481296	Trans. Shield, LE	LD-535	1	10.00%		250V 5A) (CEE)	25-2-31	1
10-16x		Trans. Cover Moltplane	LD-333	3	10-39x	EJ254970	Lug Plate KP1L1 (CSA)	33-3-3	1
10-17	ZS325495	Tapping Screw #2 3x6	21-1-10	2	10-40	EJ233370	Socket (Volt. Selector)		
10-18	EJ277108	TV-Consent-Socket 5P	31-1-19	-	10-40	2,200010	S-18010	40-2-3	1
10-19	ER376413	Spark Quencher U/L 0.033μ+120Ω 500WV	41-1-37	3	10-41	ZS379405	ISO Screw, binding head 3x6		2



Ref.	Parts No.	Description	Schematic No.	Q'ty	Ref.	Parts No.	Description	Schematic, No.	Q'ty
No.		A. () () () () ()			No.				
10-42x	EF575932	Fuse 0.8A 250V	39-1-50	1	10-67x	MZ599038	Reinforcement Angle	LE-5318	1
10-43x	EF277424	Fuse ST-4 0.8A (CSA)	39-1-28	1	10-68	EJ391083	Mic. Jack 3PMJ1P	31-2-28	1
10-44x	EF304626	Fuse ST-4 1A (CSA)	39-1-28	3	10-69x	ZW272722	Toothed Lock Washer M9		
10-45x	EF238634	Fuse 400MAT (CEE)					D9.3x13x0.5t		1
		(T Type)		1	10-70	ZW270191	E Jack Nut		1
10-46x	EF375647	Fuse 500MAT (CEE)			10-71	ES588262	Seesaw SW. 4C-2P	25-2-34	4
		(T Type)		2	10-72	ZS323728	Screw, binding head 3x5		10
10-47x	EF563681	Fuse 1A 250V (JPN)	39-1-50	3	10-73	ES588273	Seesaw SW. 6C-2P	25-2-35	1
10-48x	EA583841	Fuse P.C. Board (CSA, JPN)	LE-5312	1	10-74	EV480565	Double/Vol. DJ10A		
10-49x	EZ583852	Fuse Mt. Angle (CSA, JPN)	LE-5313	1	1 15 15 1		50 kAx2	36-3-41	1
10-50	EZ382263	Strain Relief SR-4K-4	2-7-12	1	10-75	EV603134	Double/Vol. V24L5DS		
10-51x	EZ246936	Strain Relief SR-6W-1					A50kx2 (w/SW.)	36-12-7	1
		(WG, 3 core)	2-7-8	1	10-76x	EZ584021	Lamp Table	LE-5317	1
10-52	EW540112	AC Cord 2.5M (CUL)	26-3-19	1	10-77	EJ603145	Lamp Terminal Plate B	33-2-37	2
10-53x	EW516600	Power Cord VM-0065 (CEE)	26-3-28	1	10-78x	ER591186	Lamp 6.3V 150MA	28-2-35	2
10-54x	EW524845	AC Cord 2.5M (JPN)	26-3-31	1	10-79	ZW562476	Earth Lug M3		4
10-55x	EW315448	Australia Cord (3 core)	26-3-11	1	10-80x	ZW273802	Toothed Lock Washer M3		4
10-56	BA480306	Osc. Power Supply P.C.			10-81x	ER345712	Carbon/R. RD1/4 22k(J)	3455	
		Board Comp. LE	LE-5021	1	- A. T. T. T.		(Insu. Type)	35-9-5	1
10-57x	ZS349288	ISO Screw, binding head			10-82x	ER364948	Carbon/R. RD1/4 3.3k(J)		
		3x5, w/washer	3A-745	4			(Insu. Type)	35-9-5	2
10-58x	MZ259233	Wire Band C	32-1-7	2	10-83x	EC329883	Mylar/C. 0.0056µF(J)		
10-59	EJ205975	Cramp Terminal 1-SD	2-35-1	4			50WV (Vert. Type)	24-1-1	2
10-60	MZ229138	Wire Bundle Holder N-108	32-1-8	1	10-84x	EC379157	Mylar/C. 0.033µF(J) 50WV		
10-61x	EJ205986	Cramp Terminal 2-SD (JPN)	LE-5042	4			(Vert. Type)	24-1-1	2
10-62x	EZ527095	Insurator Cloth		1	10-85x	EC250841	Mylar/C. 0.01µF(J) 50WV		
23463					100000		(Vert. Type)	24-1-1	2
	CONTROL	CHASSIS BLOCK			10-86x	EA579082	Rec. P.C. Board	LF-5314	1
10-63x	BZ589094	Control Chassis Block Comp.	LE-3	1	10-87	EL338196	Lamp (No. 2) 8V 0.2A	28-2-9	1
10-64	EZ582636	Control Frame	LE-5301	1	10-88	EZ582423	Panel Support A	LE-5302	2
10-65	EZ489363	Phone Jack Base	LE-5205	1	10-89	EZ582434	Panel Support B	LE-5303	1
10-66	ZS325495	Tapping Screw #2 3x6		15					

Ref.	Dans Na	Description	Schematic	0'+-
JACK PLATE BLOCK	Description	No.	613	
	a code a same of			
0.0250				12
		교통 가장이를 유지하면서 그렇게 다 되었습니다. 그리즘 중에 다 하다.	LE-3	1
10-91		* 35.0 (1.0 (1.0 (1.0 (1.0 (1.0 (1.0 (1.0 (1	LE-5208	1
2.2.2.2.2	EJ602188		31-5-114	1
10-93	ES484154	Slide SW. U/L 6P (Small) SJ-0282	25-3-36	1
10-94	ZS447840	Tapping Screw #2 3x8 (BR)		4
			LE-6222	1
52.324	"교환이라면 화가장하다	Carbon/R. RD1/4 330k(J)		
4 17 27 2 10	2311723345	(Insu. Type)	35-9-5	2
10-97x	ER345712			
20.000	0,700,04000	(Insu. Type)	35-9-5	4
10-98x	ER214290	그 사람이 되었다. 이 소리는 사람이 사용되지 않는데 사용하는 사용하다.		
		(Insu. Type)	35-9-5	2
10-99x	ER315213		12000	
	ALTERACES.	(Insu. Type)	35-9-5	2
		(****	7
	AMP. CHAS	SSIS BLOCK		
10-100x			LE-3	1
	** (III (II) (II) (II) (II) (II) (II) (I	and the same of th	LE-5001	1
	불면 없는 본다면까지하다.		LE-5006	1
				11
			31-1-10	1
			LE-5206	i
- '무슨, 경우라니"		"\$477" O.T.W. G.STUN."	31-2-23	2
			LD-520	2
			LD-320	-
10-100%	211433213	그리 집에 다시하면 이 나를 걸어 되어 되었다면 때 경기를 했다면 하다 때 없다.		2
10-109	ZW554624		7-1-56	2
		그렇게 하지만 하게 된데 이 모든 사이지	LE-3	1
	아무슨 아이지 않는데		3A-745	1
요즘 경험하다 경기다.			311 140	i
	다 미역시간에 및 경기간다.			1
10-113x	ZW 273002	Toothed Lock Washer MS		
	AMP ASSE	MRI V RI OCK		
10-114				
		Comp.	LE-5306	1
10-115	MH314504		MR-525	2
	게 맛있다면서 이렇게 보였다면서	- (1015년 12일 - 실어 기계	LE-5008	1
			LL 3000	2
				17
			LE-6008	1
			LE-6008	1
	" 그 그 그의 뭐든 하였다.		LD-508	i
			46-1-57	2
			LE-5023	1
			LE-5035	2
			PP-9099	
10-123	DA307121	Comp.	LE-5307	1
10-126	EZ582546	Dolby P.C. Board Table	LE-5305	i
10-120	ZW290248	U Type Speed Nut M4 #1		
	211 27 02 40	(Small)	6-3-1	1
		(Cinali)	13.2.5	

FIG. 11 PHOTO OF FINAL ASSEMBLY BLOCK



FINAL ASSEMBLY BLOCK

Ref. No.	Parts No.	Description	Schematic (Q'ty	Ref. No.	Parts No.	Description	Schematic Q	'ty
	MECH. PAI	NEL BLOCK			11-28x	ZW419646	Washer (SPC) D4.5x9.8x0.5t		4
11-1x	BZ588745	Mech. Panel Block Comp.	LE-3	1	11-29x	ZS434283	Tapping Screw #1 4x30		
11-2x	BZ588756	Mech. Panel Block Comp.					(Truss)		4
23.CX		(CSA)	LE-3	1	11-30	SZ465388	Tape Guide Table B	LC-619	1
11-3x	BZ589432	Mech. Panel Block Comp.	22 3	1.3	11-31	ZW408418	Panel Washer	KD-6029	4
		(CEE)	LE-3	1	11-32	ZS411660	Screw, oval countersunk		
11-4	SP578204	Mech. Panel A-1	LE-6001	1	11.0-	20111000	head 3x6	6	4
11-5x	SP578215	Mech. Panel B-1 (CSA)	LE-6001	î	11-33x	ZS323728	Screw, binding head 3x5		1
11-6x	SP578226	Mech. Panel C-1 (CEE)	LE-6001	1	11-34	ZW526577	Collar B, Jack	MC-5006	3
11-7	SM489611	Reel Table Ring B	LE-6203	2	11-35	SP582614	Amp. Panel	LE-6301	1
11-8	SZ276816	Capstan Rest ST-1	100180	1	11-36	SE578125	Pilot Lamp Escutcheon (Red)		i
11-9x	ZS327835	Screw, countersunk head 3x5		î	11-37	SE583255	Pilot Lamp Escutcheon	111 3011	
11-10	SE330895	Counter Escutcheon, MR		1	11.07	52505255	(Green)	TW-6017	1
	0200070	Country Escarcincon, mix	MR-646		11-38	SE582480	Meter Escutcheon	LE-6406	2
	CASE BLO	CK			11-39x	ZS483456	Screw, countersunk head	22 0100	•
11-11	BC588712	Case Block Comp.	LE-3	1	11-374	25465430	2,3x4	c .	4
11-12x				4	11-40x	ZS414336	Screw, truss head 3x6,		-
11-13	SZ609952	Tran Leg D	2-6-11	4	11-401	25414330	w/washer (Black)	ir.	2
	ZW476155		3.5.35	4	11-41	SK576628	Knob A BL	LE-6012	2
	SE382217	Fan Grill	RD-A402	1	25.00	SK583266	Knob B-BL	LE-6015	2
11-16x	[12] 발립 및 경기를 제공하다.	Tapping Screw #1 3x10	1:00,111112	â.	11-42	SC607015	Head Cover D	LE-6030	1
11-10%	25524440	(Truss) (Black)		2	11-43		Name Plate B, Head Cover	LE-6308	1
11.17	SZ480712	[10] [1] [1] [2] [2] [2] [2] [2] [2] [2] [3] [4] [4] [4] [4] [4] [4] [4] [4] [4] [4	LE-6024	2	11-44	SM605845 ZW527670		ND-6018	2
11-17	52400/12	Dust Cover Pin	DE 0024	-	11-45x	SK485651		LE-6027	1
					11-46		Head Change Knob C	CL. 5021	•
	PINIAT ACC	EMBI V DI OCV			11-47x	ZS434160	Set Screw, hexagon Socket		
		SEMBLY BLOCK				CV 502122	3x3 (cup/p.)	MS-6020	1
11-18x	ZW290248	U Type Speed Nut M4 #1		2	11-48	SK583132	Pinch Roller Cap B	3A-348	
	municass	(Small)	6-3-1	3	11-49	MP204794	Pinch Roller #3 D=40	34-340	
11-19x	ZW290250	그 없다. 아이들에 다른 내 생각이 있었다면서 하고 그리는 것으로 있다면 했다. 얼마나 없었다.	6-3-2		11-50x	ZW481072	Washer (SUP) D4x10x0.25t	LE-6018	2
	7000000	(Large)		6	11-51	SK476684	Mech. Knob		2
11-20x	ZS200610	Tapping Screw #1 4x12		755	11-52x		Mech. Knob Screw	7-1-46	2
52-250	********	(Truss)		4	11-53x	ZW432347	Washer (Luminar)		2
	ZW290283		6-1-1	1	11.64	7W260201	D6.2x13x0.125t		2
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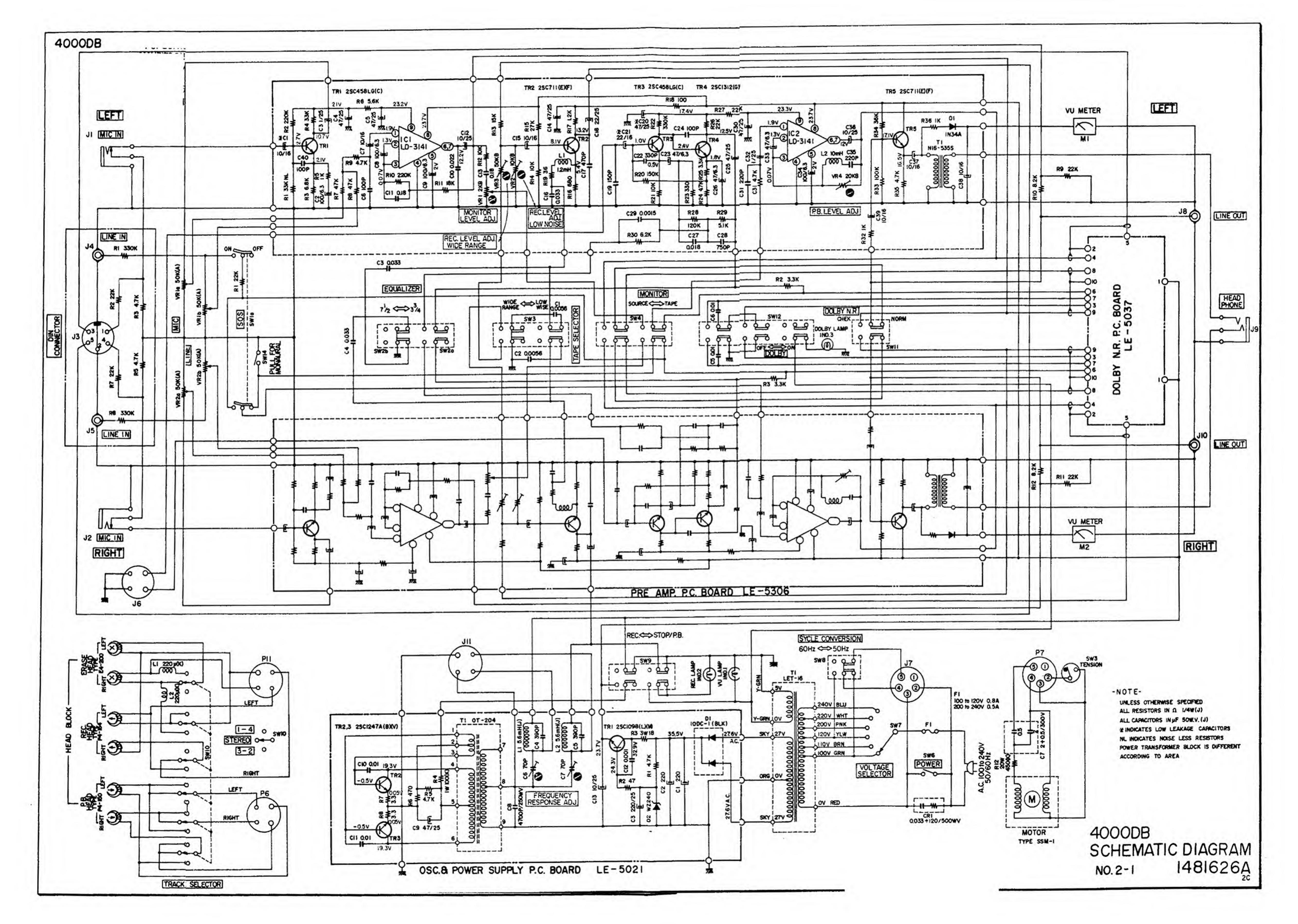
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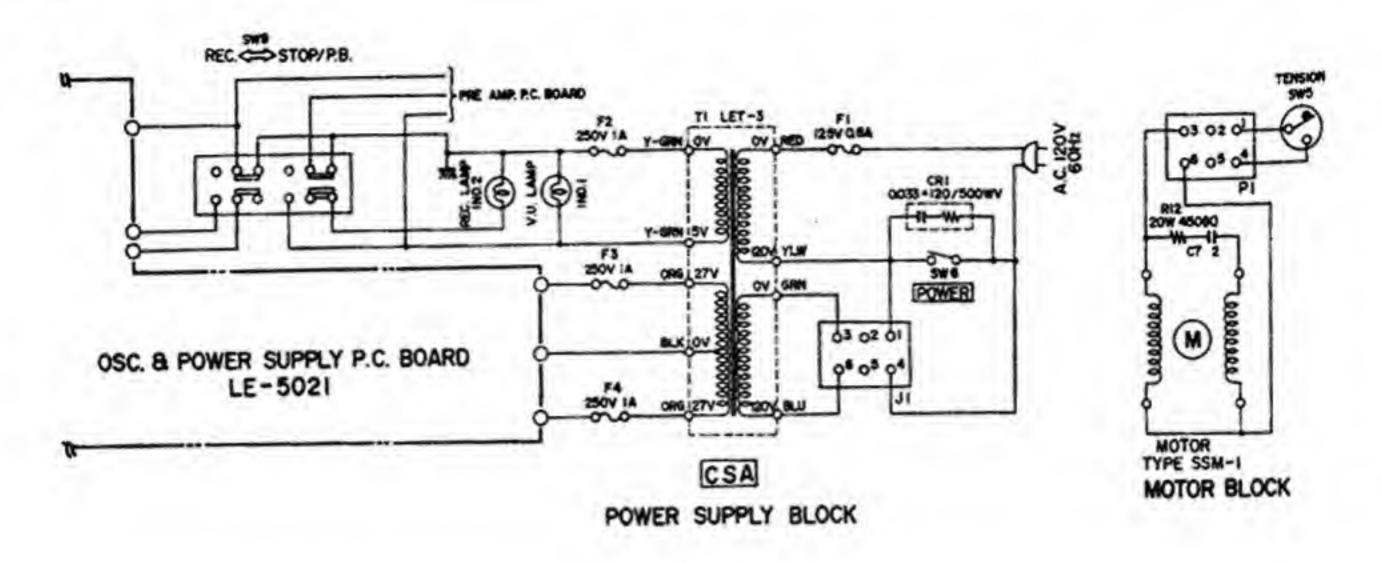
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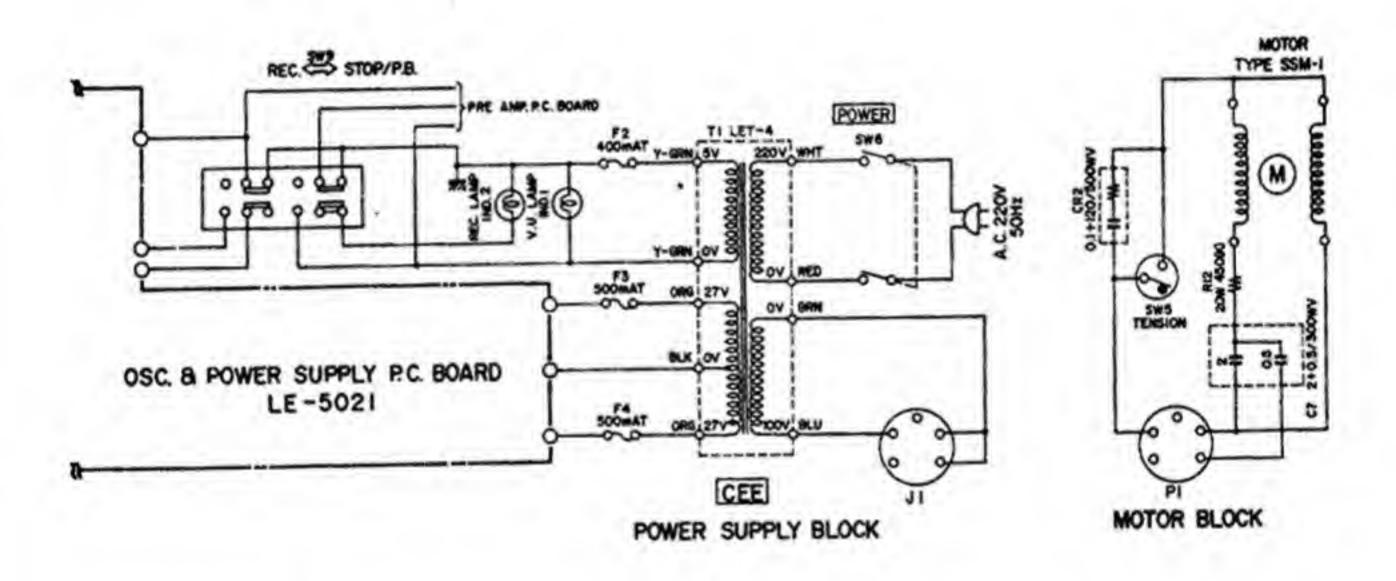
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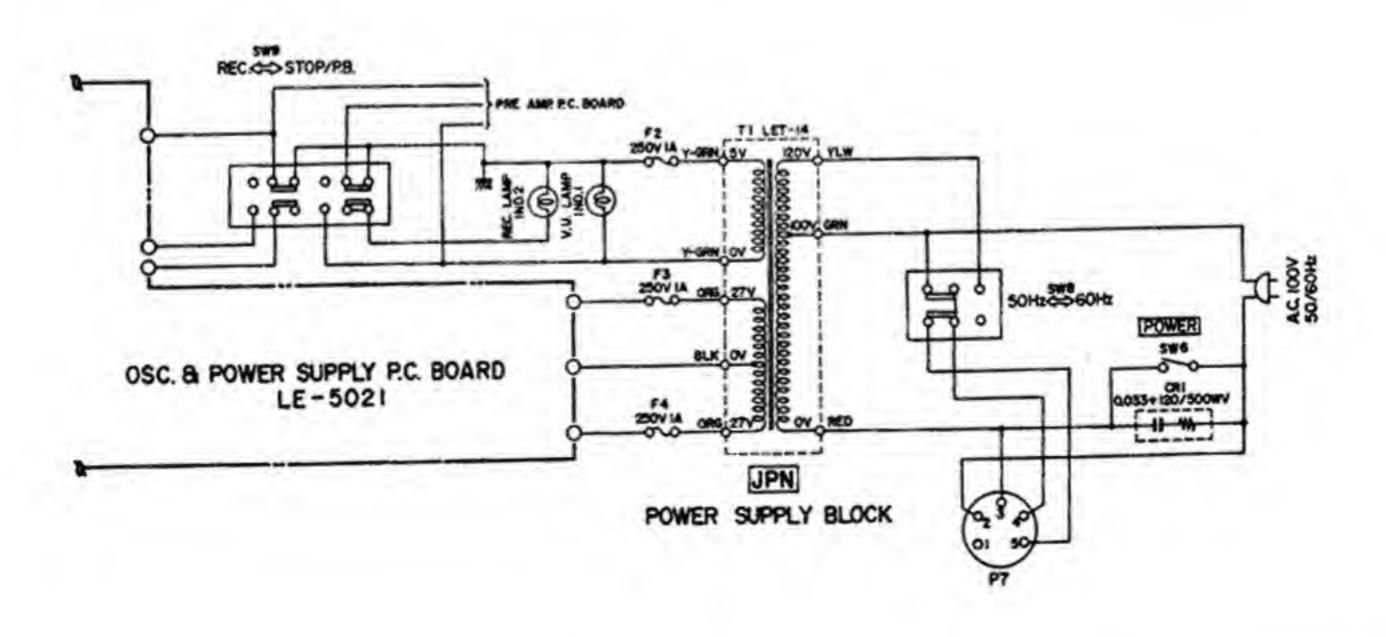
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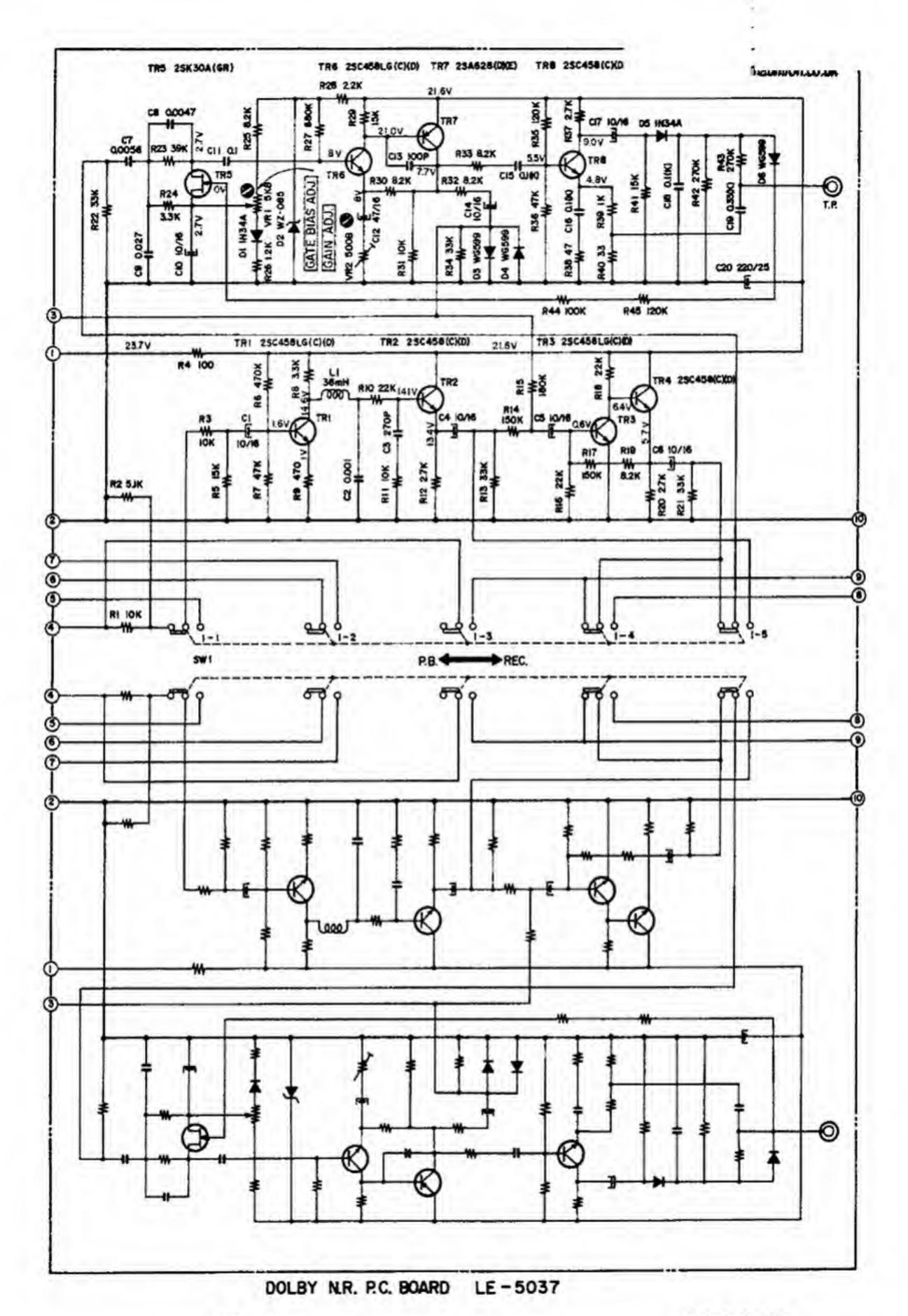
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NOTE
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN A 1/4W(J)
ALL CAPACITORS IN pF 50WV.(J)

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